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OBSTETRICAL TRANSACTIONS.

VOL. XXII.

TRANSACTIONS

OF THE

OBSTETRICAL SOCIETY

OF

LONDON.

VOL. XXII.

FOR THE YEAR 1880.

WITH A LIST OF OFFICERS, FELLOWS, ETC.

LONDON:
LONGMANS, GREEN, AND CO.
1881.

PRINTED BY J. E. ADLARD, BARTHOLOMEW CLOSE

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BRITISH SUBJECTS.

Elected

1862 McCLINTOCK, ALFRED H., M.D., late Master of the Lying-in Hospital; 21, Merrion square, Dublin.

1862 DUNCAN, JAMES MATTHEWS, M.D., A.M., LL.D., F.R.S.Ed., Physician-Accoucheur to and Lecturer on Midwifery and Diseases of Women and Children at St. Bartholomew's Hospital; 71, Brook street, Grosvenor square, W. *Council*, 1878-80. *Pres.*

1870 FARRE, ARTHUR, M.D., F.R.S. (HON. PRES.), Physician-Accoucheur to H.R.H. the Princess of Wales; 18, Albert Mansions, Victoria street, Westminster.

1871 KEILLER, ALEXANDER, M.D., F.R.S. Ed., Physician to the Royal Maternity Hospital, Lecturer on Midwifery and Diseases of Women and Children at Surgeons' Hall, Edinburgh; 21, Queen Street, Edinburgh.

1871 KIDD, GEORGE H., M.D., F.R.C.S.I., Obstetrical Surgeon to the Coombe Lying-in Hospital, and Examiner in Midwifery at the Queen's University and Royal College of Surgeons of Ireland; 30, Merrion square south, Dublin.

Elected

1870 WEST, CHARLES, M.D., F.R.C.P., Corresponding Member of the Academy of Medicine of Paris; Nice, Alpes Maritimes, France. *Pres.* 1877-8.

FOREIGN SUBJECTS.

1872 BARKER, FORDYCE, M.D., Professor of Clinical Midwifery and Diseases of Women at the Bellevue Hospital Medical College, and Obstetric Physician to the Bellevue Hospital; Consulting Physician to the New York State Woman's Hospital, &c.; 85, Madison avenue, New York.

1863 BRAUN, CARL, M.D., Professor of Midwifery, Vienna.

1875 COURTY, AMEDÉE, M.D., Clinical Professor at the Faculty of Medicine of Montpellier.

1863 DEPAUL, JEAN ANNE HENRI, M.D., Professor of Clinical Midwifery, 53, Rue de Varennes, Paris.

1863 FAYE, F. C., M.D., Professor of Midwifery in the University of Christiania.

1864 HECKER, C., Von, M.D., Munich.

1866 HUGENBERGER, THEODOR, M.D., à la Maternite et aux Enfants Trouvés Hôpital des Accouchements, Moscow.

1866 LAZAREWITCH, J., M.D., Kharkoff, Russia.

1864 PAJOT, CH. M.D., Professor of Midwifery to the Faculty of Medicine, Paris.

1862 SCANZONI, F. W. VON, M.D., Professor of Midwifery, Würzburg.

1864 SIMS, J. MARION, M.D., late Surgeon to the Women's Hospital; 267, Madison avenue, New York.

1872 SPIEGELBERG, OTTO, M.D., Professor of Clinical Midwifery, and Director of the Gynæcological Clinique in Breslau.

1877 STOLTZ, Professor, M.D., Nancy.

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1872 THOMAS, T. GAILLARD, M.D., Professor of Obstetrics in the College of Physicians and Surgeons; 296, Fifth avenue, New York.

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1876 BUDIN, P., M.D., Paris.

1876 CHADWICK, JAMES R., M.A., M.D., Physician for Diseases of Women, Boston City Hospital; Clarendon street, Boston, Massachusetts, U.S.

1877 GOODELL, WILLIAM, A.M., M.D., Professor of Clinical Gynæcology in the University of Pennsylvania; Philadelphia, Pennsylvania.

1876 LUSK, WILLIAM J., M.D., Professor of Obstetrics, Bellevue Hospital Medical College; New York.

1876 PREVÔT, OSCAR, M.D., Moscow.

1877 STORER, HORATIO, M.D., Boston, Mass.

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JANUARY, 1881.

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1859 ALDERSEY, William Hugh, M.B. Lond., F.R.C.S., 37, St. Andrew's Square, Surbiton.

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1878 ALDRED, HENRY ALLEN, M.D., 4, Westbourne park, W.

1878 ALFORD, FREDERICK STEPHEN, 61, Haverstock hill, N.W.

1873 ALLEN, HENRY MARCUS, M.R.C.P. Ed., 38, Regency square, Brighton.

1859 AMSDEN, GEORGE JOHN, M.D., Holly Lodge, Crawley, Sussex.

1878 ANDERSON, IZETT WILLIAM, M.D., 92, Hanover street, Kingston, Jamaica. *Hon. Loc. Sec.*

1875 ANDERSON, JOHN FORD, M.D., C.M., 28, Buckland crescent, Belsize park, N.W.

1866 ANDREWS, HENRY CHARLES, M.D., 1, Oakley square, N.W.

1859 ANDREWS, JAMES, M.D., 149, Camden road, N.W. *Council*, 1881.

1870 APPLETON, ROBERT CARLISLE, Toll Garel, Beverley.

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1871 ARGLES, FRANK, L.R.C.P. Ed., Hermon Lodge, Wanstead, Essex, N.E.

1861 ARMSTRONG, JOHN, M.D., Green street green, Dartford, Kent.

O.F. AVELING, JAMES H., M.D., Physician to the Chelsea Hospital for Women; 1, Upper Wimpole Street, W. *Council*, 1865-66, 1872. *Hon. Sec.* 1873. *Hon. Lib.* 1874-6. *Vice-Pres.* 1877-8.

1872 AYLING, ARTHUR H. W., 103, Great Portland street, W.

1859 AYLING, WILLIAM HENRY, L.R.C.P. Ed., 103, Great Portland street, W.

1880 BAILEY, FRANCIS JAMES, 51, Grove Street, Liverpool.

1873 BAILEY, JAMES JOHNSON, M.D., L.R.C.P. Ed., Hill Crest, Marple, Cheshire.

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1859 BAKER, JOHN WRIGHT, Surgeon to the Derbyshire General Infirmary; 102, Friar gate, Derby. *Council*, 1879-80. *Hon. Local Sec.*

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1869 BANTOCK, GEORGE GRANVILLE, M.D., Surgeon to the Samaritan Free Hospital; 12, Granville place, Portman square, W. *Council*, 1874-6.

1874 BARBER, EDWARD, 259, Glossop road, Sheffield.

1874 BARCLAY, JOHN, M.D., 10, Low street, Banff.

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1866 BOULTON, PERCY, M.D., Physician for Out-patients to the Samaritan Free Hospital; 6, Seymour street, Portman square, W. *Council*, 1878-80.

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1862 BRAITHWAITE, WILLIAM, M.D., late Lecturer on Midwifery, Leeds School of Medicine; Clarendon House, 20, Clarendon road, Leeds. *Council*, 1869-70.

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1880 BRUCE, ROBERT, 70, Old street, St. Luke's, E.C.

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1861 BUNNY, JOSEPH, M.D., Hon. Surgeon to the Newbury Dispensary; Northbrook street, Newbury, Berks.

1877 BURCHELL, PETER LODOWICK, M.B., Surgeon-Accoucheur to the City of London Lying-in Hospital; 2, Kingsland road, E.

1877 BURD, EDWARD, M.D., M.C., Senior Physician to the Salop Infirmary; Newport House, Shrewsbury.

1878 BURN, STACEY SOUTHERDON, Whitecroft, Nailsworth, Gloucestershire.

1867 BURNETT, CHARLES, M.B., Biggleswade, Bedfordshire.

1862 BURTON, JOHN MOULDEN, F.R.C.S., Lee park lodge, Lee, Kent, S.E. *Council*, 1868-69.

1878 BURTON, WILLIAM, L.R.C.P. Ed., 79, New North road, Hoxton, N.

1864 BUTLER, FREDERICK JOHN, M.D., Surgeon to Winchester College and St. Cross Hospital, and to the Hants County Hospital, Winchester. *Hon. Loc. Sec.*

1868 BUTT, WILLIAM FREDERICK, L.R.C.P. Lond., 25 Park street, Park lane, W. *Council*, 1876-78.

Elected

1861 CANDLISH, HENRY, M.D., Physician to the Alnwick Infirmary; 26, Fenkle street, Alnwick, Northumberland.

1861 CANDY, JOHN, M.D., Surgeon-Major, Army Medical Department. [*Per* Messrs. Wm. Watson & Co., Anglo-Indian Agency, 27, Leadenhall street, E.C.]

1872 CARLESS, EDWARD NICHOLLS, M.B., C.M., Lansdowne grove, Devizes, Wilts.

1863 CARLYLE, DAVID, M.D., 2, The Crescent, Carlisle.

1861 CARTER, ALBERT PLEYDELL, Wellington House, London road, Gloucester.

1872 CARTER, CHARLES HENRY, M.D., Physician to the Hospital for Women; 45, Great Cumberland place, Hyde Park, W. *Council*, 1880-1.

1877 CARVER, EUSTACE JOHN, Fairlawn, Fulham.

1869 CASKIE, JOHN BOYD, M.D., 89, Goswell road, E.C.

1878 CASKIE, WILLIAM ALEX., M.A., M.B., Manse Court, 17, Main street, Largs, Ayrshire, N. B.

1870 CAUSTON, WILLIAM HENRY, 1, Pomona place, Hammersmith.

1863 CAYZER, THOMAS, Mayfield, Aigburth, Liverpool.

1875 CHAFFERS, EDWARD, F.R.C.S., 54, North street, Keighley, Yorkshire.

1873 CHALMERS, JOHN, M.D., 43, Caledonian road, N.

1864 CHAMBERS, THOMAS, F.R.C.P. Ed., F.R.C.S. Ed., Senior Physician to the Chelsea Hospital for Women, Consulting Physician Accoucheur to the Western Maternity; 64, Chester square, S.W. *Council*, 1874-6.

1876 CHAMPNEYS, FRANCIS HENRY, M.A., M.B. Oxon., Assistant Obstetric Physician to St. George's Hospital, 11, Wyndham place, Bryanston square, W. *Council*, 1880-1.

1859 CHANCE, EDWARD JOHN, F.R.C.S., Surgeon to the Metropolitan Free Hospital and City Orthopædic Hospital; 59, Old Broad street, City, E.C.

Elected

1867* CHARLES, T. EDMONDSTOUNE, M.D., Professor of Midwifery at the Calcutta Medical College, 10, Harrington street, Calcutta.

1874 CHARLESWORTH, JAMES, 25, Birch terrace, Hanley, Staffordshire.

1868 CHILD, EDWIN, New Malden, Kingston-on-Thames, Surrey.

1863* CHISHOLM, EDWIN, M.D., Abergeldie, Ashfield, near Sydney, New South Wales. [Per Messrs. Turner and Henderson, care of Messrs. W. Dawson, 121, Cannon street, E.C.].

1879 CHURCHILL, ALEX. FERRIER, M.B., Surgeon-Major, V Lines, South Camp, Aldershot.

1859 CLAREMONT, CLAUDE CLARKE, Millbrook House, 1, Hampstead road, N.W.

1859 CLARK, JAMES FENN, Clent house, Beauchamp square, Leamington. *Hon. Loc. Sec.*

1874 CLARK, JAMES HENRY, L.R.C.P. Ed., Goschen Post-office, St. Elizabeth, Jamaica. [Per J.W. Goodinge, F.R.C.S., 18, Aldersgate street, E.C.]

1879 CLARKE, REGINALD, South Lodge, Lee park, Lee, S.E.

1872 CLARKE, WILLIAM MICHELL, late Surgeon to the British General Hospital; 2, York buildings, Clifton, Bristol.

O.F. CLAY, CHARLES, M.D., late Lecturer on Midwifery and Clinical Medicine in St. Mary's Hospital, Manchester; Audenshaw Lodge, Audenshaw; and 101, Piccadilly, Manchester. *Council*, 1863-65.

1876 CLAY, GEORGE LANGSFORD, West View, 443, Moseley road, Birmingham.

O.F. CLAY, JOHN, Professor of Midwifery, Queen's College, Birmingham; Allan House, 138-9, Steelhouse lane, Birmingham. *Council*, 1868-69. *Vice-Pres.* 1872-4.

O.F. CLEVELAND, WILLIAM FREDERICK, M.D., Stuart villa, 199, Maida vale, W. *Council*, 1863-64. *Vice-Pres.* 1875-77.

1861 CLOGG, STEPHEN, Looe, R.S.O., Cornwall.

Elected

1865* COATES, CHARLES, M.D., Physician to the Bath General and Royal United Hospitals; 10, Circus, Bath.

1860 COCKELL, EDGAR, Holly lodge, 62, Forest road, Dalston, N.E.

1859 COCKELL, FREDERICK EDGAR, 144, Amherst road, Hackney, N.E.

1878 COCKELL, FREDERICK EDGAR, Jun., 62, Forest road, Dalston, N.E.

1875 COFFIN, RICHARD JAS. MAITLAND, F.R.C.P. Ed., Alwington house, Baron's court, West Kensington, W.

1878 COFFIN, THOMAS WALKER, 81, Queen's crescent, Haverstock hill, N.W.

1875 COLE, RICHARD BEVERLY, M.D. Jefferson Coll. Philad., San Francisco, California, U.S. [*Per* Mr. Henry Perkins, 14, Ampthill square, Regent's park.]

1876 COLEMAN, MATTHEW OWEN, M.D., 5, Victoria terrace, Surbiton, Surrey.

1877 COLMAN, WALTER TAWELL, Hon. Surgeon to the Brighton Hospital for Women; 87, Buckingham road, Brighton.

1866 COOMBS, JAMES, M.D., Bedford.

1873 COOPER, FRANK W., Leytonstone, Essex.

1874 COOPER, HERBERT, L.R.C.P. Ed., 3, Rosslyn terrace, Hampstead, N.W.

1861 COOPER, JOHN, M.R.C.P. Ed., Clapham rise, S.W.

1872 COOTE, MICHAEL, M.D., 15, Ivanhoe terrace, Ashby-de-la-Zouch.

1875 CORDES, AUG., M.D., Professor of Obstetrics at the University of Geneva; 8, Corraterie, Geneva.

1866 CORNWALL, JAMES, F.R.C.S., Fairford, Gloucestershire.

1860 CORRY, THOMAS CHARLES STEUART, M.D., Senior Surgeon to the Belfast General Dispensary; 146, Donegall Pass, Belfast. *Council*, 1867. *Hon. Loc. Sec.*

1859 CORY, FREDERICK CHARLES, M.D., Portland villa, Buckhurst hill, Essex. *Council*, 1867-69.

1875 CORY, ROBERT, M.D., Assistant Obstetric Physician to St. Thomas's Hospital; 14, Palace road, Albert Embankment, S.E. *Council*, 1879-81.

Elected

1879 COWAN, GEORGE HUGHES, M.B., Nepanee, Ontario, Canada.

1869 COX, RICHARD, L.R.C.P. Ed., Theale, near Reading.

1877 CRAWFORD, JAMES, L.K.Q.C.P.I., Ightham, Sevenoaks.

1876 CREW, JOHN, Higham Ferrers, Northamptonshire.

1859 CROFT, J. MCGRIGOR A. T., M.D., M.R.C.P., 15, Abbey road, St. John's Wood, N.W.

1866 CROFT, ROBERT CHARLES, L.R.C.P. Ed., 204, Camden road, N.W.

1874 CROMBIE, CHARLES MANN, M.B. & C.M., 10, Union terrace, Aberdeen.

1860 CROSS, RICHARD, M.D., Carlton House, Belmont road, Scarborough, Yorkshire. *Hon. Loc. Sec. Council*, 1880-1.

1869 CROSS, ROBERT SHACKLEFORD, Petersfield, Hants.

1867 CROUCHER, HENRY, West Hill, Dartford, Kent.

1879 CROWDEN, JAMES TRIGUE, M.D., Gedney Hill, Wisbeach, Lincolnshire.

1875* CULLINGWORTH, CHARLES JAMES, Surgeon to St. Mary's Hospital, Manchester; 260, Oxford road, Manchester.

1859 CULPEPER, WILLIAM MOE, 1, Brunswick terrace, Palace gardens, Kensington, W.

1862 CUMBERBATCH, LAWRENCE TRENT, M.D., 25, Cadogan place, Belgrave square, S.W. *Council*, 1868-70. *Vice-Pres.*, 1878.

1867 CUOLAHAN, HUGH, M.D., 9, Grange road, Bermondsey, S.E.

1859 CURGENVEN, J. BRENDON, 11, Craven hill gardens, Bayswater, W. *Council*, 1870-72.

1868 DALY, FREDERICK HENRY, M.D., 101, Queen's road, Dalston, N.E. *Council*, 1877-9.

1876 DAVIES, GOMER, L.R.C.P. Ed., 66, Pembridge villas, Bayswater, W.

1878 DAVIES, HENRY NAUNTON, Glyn Rhondda House, Cymer, Pontypridd, Glamorganshire.

Elected

O.F. DAVIS, JOHN HALL, M.D., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women and Children at, the Middlesex Hospital; Physician to the Royal Maternity Charity; Consulting Physician-Accoucheur to the St. Pancras Infirmary; 24, Harley street, Cavendish square, W. *Council*, 1859, 1864-65. *Vice-Pres.* 1861-63. *Pres.* 1867-68.

1863 DAVIS, ROBERT ALEX., M.D., St. Michael's Villas, Trent Valley Road, Lichfield, Stafford.

1873 DAVISON, FRANCIS, L.R.C.P. Ed., Loffi, Morocco.

1877 DAVSON, SMITH HOUSTON, M.D., Camden villa, 203, Maida vale, W.

1878 DAY, EDMUND OVERMAN, House Surgeon to the Royal Infirmary for Children and Women, Waterloo Bridge road.

1880 DAY, WILLIAM HANKES, Surgeon to the City Prisons, Norwich; All Saints' Green, Norwich.

1859 DAY, WILLIAM HENRY, M.D., Physician to the Samaritan Free Hospital for Women and Children; 10, Manchester square, W. *Council*, 1873-75.

1877 DEAN, MARSHALL M. P., M.D., Keene, Ontario, Canada.

1872 DENTON, GEORGE BAGSTER, Surgeon to the Ladies' Charity and Lying-in Hospital; 2, Abercromby square, Liverpool.

1877 DEWAR, JOHN, L.R.C.P. Ed., 132, Sloane street, S.W.

1860 DICKENSON, JOHN, F.R.C.S., Hon. Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire.

1879 DOLAN, THOMAS MICHAEL, L.R.C.P. Ed., 32, North parade, Halifax.

1877 DONOVAN, JOHN ISLAND, M.D., Skibbereen, Co. Cork.

1879 DORAN, ALBAN H. G., F.R.C.S., 50, Seymour street, Portman square, W.

1880 DOWNES, DENIS SIDNEY, 55, Kentish town road, N.W.

O.F. DRAGE, CHARLES, M.D., Hatfield, Herts. *Council*, 1861-4.

1878 DRING, WILLIAM ERNEST, L.R.C.P. Ed., Boughton-under-Blean, Faversham, Kent.

Elected

1876 DUKE, GEORGE AMOS, 9, Cornwall road, Westbourne road, W.

O.F. DUNCAN, JAMES, M.B., 8, Henrietta street, Covent garden, W.C. *Council*, 1873-74.

1859 DUNCAN, PETER CHARLES, M.D.

1871 EASTES, GEORGE, M.B., F.R.C.S., Surgeon-Accoucheur to the Western General Dispensary; 69, Connaught street, Hyde park square, W. *Council*, 1878-80.

1866 EASTON, JOHN, M.D., 19, Norfolk Crescent, Hyde park, W. *Council*, 1878.

1878 EATON, JOHN CHAMBERLIN, Ancaster, Lincolnshire.

1877 EDDOWES, WILLIAM, Surgeon to the Salop Infirmary, 3, The College, Shrewsbury.

1867 EDIS, ARTHUR W., M.D., Assistant-Physician-Accoucheur to the Middlesex Hospital; 22, Wimpole street, W. *Council*, 1873-74. *Hon. Sec.* 1874-77. *Vice-Pres.* 1878-80.

1879 ELDER, GEORGE, M.B., C.M., Surgeon to the Hospital for Women, Nottingham; 17, Regent street, Nottingham.

1879 ELKINGTON, ARTHUR GUY, Surgeon-Major, Grenadier Guards, 52, Gillingham street, Eccleston square, S.W.

1878 ELLERY, RICHARD, L.R.C.P. Ed., Plympton, Devon.

1862 ELLISON, JAMES, M.D., Surgeon to H.M.'s Household, Windsor; 14, High street, Windsor, Berks. *Council*, 1873-75.

1873 ENGELMANN, GEORGE JULIUS, A.M., M.D., 3003, Locust street, St. Louis, Missouri, U.S.

1871 EVANS, THOMAS WALTER, 101, Heyworth street, Everton, Liverpool.

1879 EVERSHED, CHARLES L., Arundel, Sussex.

1875 EWART, JOHN HENRY, Surgeon to St. Mary's Hospital for Women and Children; Limefield House, Cheetham hill, Manchester.

1875 EYELEY, JOSEPH FREDERICK, L.R.C.P. Lond., 5, Hill-park crescent, Plymouth.

Elected

1876 FARNCOMBE, RICHARD, 40, Belgrave street, Balsall heath, Birmingham.

1869 FARQUHAR, WILLIAM, M.D., Surgeon-Major, Madras Army, Bangalore, Madras Presidency. [24, Pembroke gardens, Kensington.]

1861 FARR, GEO. F., L.R.C.P. Ed., Slade House, 175, Kennington road, S.E.

1879 FAYRER, SIR JOSEPH, M.D., K.C.S.I., 16, Granville place, Portman square.

1868 FEGAN, RICHARD, M.D., 1, Charlton park terrace, Old Charlton, Kent.

1872 FERGUSSON, ALEXANDER, M.D., F.R.C.S. Ed., Tweedbrae House, Peebles, N.B.

1861 FETHERSTON, GERALD H., M.D.; Hon. Physician to the Melbourne Lying-in Hospital, Prahran, Melbourne, Victoria. *Hon. Loc. Sec.*

1873 FINEGAN, JAMES HERBERT, M.D., Obstetric Surgeon to, and Lecturer on Midwifery at, the Liverpool Lying-in Hospital; 48, Rodney street, Liverpool.

1870 FISHER, JOHN MOORE, M.D., 2, Balmoral terrace, Anlaby road, Hull.

1874 FITZRAYNE, WILLIAM ALLEN, 10, Freeschool street, Horselydown, S.E.

1868 FLETCHER, EDWARD, Lygon street, Carlton, Melbourne, Victoria.

1878 FLINT, ARTHUR, Westgate-on-Sea, Isle of Thanet.

1877* FONMARTIN, HENRY DE, M.D.

1876 FORBES, LITTON.

1877* FORD, JAMES, M.D., Eltham, Kent.

1865 FOWLER, JAMES, F.S.A., Hon. Surgeon to the Clayton Hospital and Wakefield General Dispensary; 13, South Parade, Wakefield. *Council,* 1872-4. *Hon. Loc. Sec.*

1866 FOX, CORNELIUS BENJAMIN, M.D., Highfield Road, Ilfracombe.

1877 FOXON, FOXON, 231, Brompton road, S.W.

1862 FRAIN, JOSEPH, M.D., Hon. Surgeon to the South Shields Dispensary; Frederick street, South Shields.

Elected

1875 FRASER, ANGUS, M.D., 232, Union street, Aberdeen.

1867 FREEMAN, HENRY W., 24, Circus, Bath.

1880 FRY, JOHN BLOUNT, Swindon, Wiltshire.

1867 FULLER, CHARLES C., 33, Albany street, Regent's park, N.W.

1874* GALABIN, ALFRED LEWIS, M.A., M.D., Assistant Obstetric Physician to, and Joint Lecturer on Midwifery at, Guy's Hospital; 14, St. Thomas's street, Southwark, S.E. *Council*, 1876-78. *Hon. Lib.* 1879. *Hon. Sec.* 1880-1.

1863 GALTON, JOHN H., M.D., Woodside road, Upper Norwood, S.E. *Council*, 1874-6.

1879 GARDNER, JOHN TWINAME, 6, Hillsboro' terrace, Ilfracombe.

1872 GARDNER, W., M.A., M.D., 551, St. Joseph street, Montreal, Canada.

1863 GARMAN, HENRY VINCENT, Kent House, 6, Bow road, E.

1876 GARNER, JOHN, 52, New Hall street, Birmingham.

1879 GARSTANG, THOMAS W. HARROPP, Oakleigh, Dobcross, near Manchester.

1873 GARTON, WILLIAM, M.B., F.R.C.S., Hardshaw street, St. Helen's, Lancashire.

1859 GASKOIN, GEORGE, 7, Westbourne park, W. *Council*, 1870-72.

1875 GAWITH, J. JACKSON, 23, Westbourne park terrace, W.

1869 GEIKIE, WALTER B., M.D., F.R.C.S. Ed., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the University of Trinity College, Toronto, Ontario, Canada.

1877 GELL, THOMAS SILVESTER, M.D., St. John's Lodge, Kensal green, W.

1859 GERVIS, HENRY, M.D., F.R.C.P., Obstetric Physician to, and Lecturer upon Obstetric Medicine at, St. Thomas's Hospital; Examiner in Obstetric Medicine at the University of London; 40, Harley street, Cavendish square. *Council*, 1864-66. *Hon. Sec.* 1867-70. *Vice-Pres.* 1871-3. *Treas.* 1878-81.

1866 GERVIS, FREDERICK HEUDEBOURCK, 1, Fellows road, Haverstock hill, N.W. *Council*, 1877-9.

1875 GIBBINGS, ALFRED THOMAS, M.D., 93, Richmond road, Dalston, N.E.

Elected

1874 GIBSON, JAMES EDWARD, Hillside, West Cowes, Isle of Wight.

1866 GIDDINGS, WILLIAM KITTO, L.R.C.P. Ed., Shaftesbury House, Calverley, near Leeds, Yorkshire.

1877 GIFFARD, DOUGLAS WILLIAM, 44, Old Steyne, Brighton.

1875 GILES, PETER BROOME, L.R.C.P. Ed., Staunton-on-Wye, Hereford.

1869 GILL, WILLIAM, L.R.C.P. Lond., 11, Russell square, W.C.

1867 GITTINS, JOHN, L.R.C.P. Ed., St. Olave's Union, Parish street, Southwark, 134, Tooley street, S.E.

1871 GODDARD, EUGENE, L.R.C.P. Lond., North Lynne, Highbury New Park, N.

1876 GODFRAY, ALFRED CHARLES, M.B., L.R.C.P. Ed., 43, La Motte street, Jersey.

1877 GODSON, CHARLES, F.R.C.S., 1, Astwood road, Cromwell road, South Kensington, S.W.

1871 GODSON, CLEMENT, M.D., C.M., Assistant Physician-Accoucheur to St. Bartholomew's Hospital; 9, Grosvenor street, W. *Council*, 1876-77. *Hon. Sec.* 1878-81.

1868 GODWIN, ASHTON, M.D., 28, Brompton crescent, Brompton, S.W.

1873 GOLDSMITH, JOHN, M.D., Highworth House, Worthing, Sussex.

1873 GOODCHILD, NATHANIEL, L.R.C.P. Ed., 9, Highgate road, N.W.

1869 GOSS, TREGENNA BIDDULPH, 36, The Paragon, Bath.

1875 GRAY, JAMES, M.D., 15, Newton terrace, Glasgow.

1874 GREENE, WILLIAM THOMAS, M.D., T.C.D., Moira House, Peckham rye, S.E. *Council*, 1880.

1863 GRIFFITH, G. DE GORREQUER, Physician to the Hospital for Women and Children, Pimlico; Physician-Accoucheur to St. Saviour's Maternity; 9, Lupus street, St. George's square, S.W.

1869 GRIFFITH, JOHN T., M.D., Talfourd House, Camberwell, S.E.

1879 GRIFFITH, WALTER SPENCER ANDERSON, St. Bartholomew's Hospital.

Elected

1880 GRIFFITHS, GRIFFITH, Brynedyn, Pontardawe, Swansea Valley.

1870 GRIGG, WILLIAM CHAPMAN, M.D., Physician to the In-patients, Queen Charlotte's Lying-in Hospital; Assistant Obstetric Physician to the Westminster Hospital; Assistant-Physician to the Victoria Hospital for Children; 6, Curzon street, Mayfair. *Council*, 1875-77.

O.F. GRIMSDALE, THOS. F., L.R.C.P. Ed., Consulting Surgeon to the Lying-in Hospital, and late Lecturer on Diseases of Children, &c., at the Royal Infirmary School of Medicine; 29, Rodney street, Liverpool. *Council*, 1861-62. *Vice-Pres.* 1875-76.

1880 GROGONO, WALTER ATKINS, 216, High Street, Stratford, E.

1877 GROSHOLZ, FREDERICK HERMANN VARLEY, L.K.Q.C.P.I., Pier House, Aberdovey, Merionethshire, North Wales.

1876 GROTH, ERNST R. G., M.D., 5, Weymouth street, Portland place, W.

1879 GROVE, WILLIAM RICHARD, M.D., St. Ives, Huntingdonshire.

1867 HADAWAY, JAMES, L.R.C.P. Ed., 47B, Welbeck street, Cavendish square, W.

1876 HADDEN, JOHN, M.D., 31, West street, Horncastle, Lincolnshire.

1859 HALL, FREDERICK, 1, Jermyn street, St. James's, S.W.

1867 HALL, JOHN HENRY WYNNE, L.R.C.P. Ed., 33, Albert terrace, Albert square, Clapham road, S.W.

1871 HALLOWES, FREDERICK B., Redhill, Reigate, Surrey.

1880 HAMES, GEORGE HENRY, F.R.C.S., 7, Coburg place, Kensington gardens, W.

1880 HAMILTON, THOMAS, M.D., 30, Northampton park, Canonbury.

1874 HANNAN, FRANCIS JOHN, M.B., Avonside, Downton, Wilts.

1860 HARDEY, KEY, Surgeon to the West City Dispensary; 4, Wardrobe place, Doctors' Commons, E.C.

1872 HARDING, WILLIAM, F.R.C.S., 4, Percy street, Bedford square, W.C.

Elected

1877 HARPER, GERALD S., 5, Hertford street, May Fair, W.

O.F. HARPER, PHILIP H., F.R.C.S., 30, Cambridge street, Hyde park, W.

1878 HARRIES, THOMAS DAVIES, F.R.C.S., 36, North Parade, Aberystwith, Cardiganshire.

O.F. HARRINSON, ISAAC, F.R.C.S., Castle street, Reading, Berks. *Council*, 1862-65. *Hon. Loc. Sec.*

1862 HARRIS, CHARLES, M.D., Northiam, Ashford, Kent.

1871 HARRIS, CHARLES JAMES, 11, Kilburn Priory, N.W.

1872 HARRIS, HENRY, M.D., F.R.C.S., Trengweath place, Redruth Cornwall.

1867 HARRIS, WILLIAM H., M.D., Professor of Midwifery in the Madras Medical College, and Superintendent of the Lying-in Hospital, Madras [agent: Mr. H. K. Lewis, Gower street].

1861 HARRIS, WILLIAM JOHN, 13, Marine Parade, Worthing. *Hon. Loc. Sec.*

1880 HARRISON, RICHARD CHARLTON, 55, Coningham road, Shepherd's Bush, W.

1879 HARVEY, GEORGE, L.R.C.P. Ed., Wirksworth, Derbyshire.

1880 HARVEY, JOHN STEPHENSON, 26, Rue Wissocq, Boulogne-sur-Mer, France.

1865 HARVEY, ROBERT, M.D., 52, Chowringhee, Calcutta. [Per Messrs. Cochran and Anderson, 152, Union street, Aberdeen.] *Hon. Loc. Sec.*

1873 HATHERLY, HENRY REGINALD, L.R.C.P. Ed., Wellington street, Park side, Nottingham.

1865 HAYES, HAWKESLEY ROCHE, Basingstoke, Hants.

1873 HAYES, THOMAS CRAWFORD, M.D., Assistant Obstetric Physician to King's College Hospital; 17, Clarges street, Piccadilly, W. *Council*, 1876-78.

HEADLEY, see *Balls-Headley*.

1880 HEATH, WILLIAM LENTON, Resident Midwifery Assistant, St. Bartholomew's Hospital, E.C.

1867 HEMBROUGH, JOHN WILLIAM, Ivy cottage, Waltham, Grimsby.

Elected

1870 HENDERSON, ALEXANDER, 2, Meadow Bank place, Rose vale, Partick, Glasgow.

1878 HENRY, LOUIS, M.D., Melbourne, Victoria, Australia [per J. Kilpatrick, Esq., 2, Northampton Square, Clerkenwell, E.C.].

1876 HERMAN, GEORGE ERNEST, M.B., Assistant Obstetric Physician to the London Hospital, 7, West street, Finsbury circus, E.C. *Council*, 1878-79. *Hon. Lib.* 1880-1.

O.F. HEWITT, GRAILY, M.D., F.R.C.P., Professor of Midwifery in University College, London, and Obstetric Physician to University College Hospital; 36, Berkeley square, W. *Hon. Sec.* 1859-64. *Treas.* 1865-66. *Vice-Pres.* 1867-68. *Pres.* 1869-70.

1867 HICKINBOTHAM, JAMES, M.D., L.R.C.P. Ed., Physician to the Birmingham and Midland Hospital for Women; 26, Broad street, Birmingham.

1876 HICKS, EDWARD JOHN W., M.D., C.M., Port Elliot, South Australia.

1860 HICKS, JOHN BRAXTON, M.D., F.R.C.P., F.R.S., Physician-Accoucheur to, and Lecturer on Midwifery and the Diseases of Women and Children at, Guy's Hospital; 24, George street, Hanover square. *Council*, 1861-2, 1869. *Hon. Sec.* 1863-65. *Vice-Pres.* 1866-68. *Treas.* 1870. *Pres.* 1871-2.

1860 HIGGS, THOMAS FREDERIC, L.R.C.P. Ed., Beaconsfield House, Dudley, Worcestershire.

1880 HILL, JAMES, M.D., 1, Berkeley Gardens, Kensington.

1879 HILL, T. WOOD, L.R.C.P. Ed., 96, Earl's court road, West Cromwell road, W.

1872 HILLIARD, ROBERT HARVEY, M.D., Fairmead House, 5, Belgrave terrace, Upper Holloway road, N.

1868 HIME, THOMAS WHITESIDE, M.B., 217, Glossop road, Sheffield.

1878 HINTON, JAMES THOMAS, Croydon, Surrey.

1876 HOAR, WILLIAM, Maidstone, Kent.

O.F. HODGES, RICHARD, M.D., F.R.C.S., 25, York place, Baker street, W.

Elected

1864 HOFFMEISTER, WILLIAM CARTER, M.D., Surgeon to the Queen in the Isle of Wight; Clifton House, Cowes, Isle of Wight. *Council*, 1877-9.

1875 HOLLINGS, EDWIN, L.R.C.P. Ed., 4, Gordon street, Gordon square, W.C.

1859 HOLMAN, CONSTANTINE, M.D., Barons, Reigate, Surrey. *Council*, 1867-69. *Vice-Pres.* 1870-71.

1860 HOLMAN, HENRY MARTIN, M.D., Hurstpierpoint, Sussex.

1880 HONIBALL, OSCAR DUNSCOMBE, M.D., George Town, Demerara, British Guiana.

1864 HOOD, WHARTON PETER, M.D., 65, Upper Berkeley street, Portman square, W.

1872 HOPE, WILLIAM, M.D., Physician to Queen Charlotte's Lying-in Hospital; 56, Curzon street, Mayfair, W. *Council*, 1877-9.

1874 HOPKINS, ALFRED BOYD, 180, Shoreditch, E.

1876 HORSMAN, GODFREY CHARLES, 22, King street, Portman square, W.

1864 HOUGHTON, HENRY GEORGE, L.K.Q.C.P. Ireland; 6, Mount street, Grosvenor square, W.

1877 HOWELL, HORACE SYDNEY, M.D, 11, Boundary road, St. John's Wood, N.W.

1879 HOWIE, JAMES MUIR, M.D. Edin., 50, Rodney street, Liverpool.

1879 HUBBARD, THOMAS WELLS, Lenham, near Maidstone, Kent.

1876 HUE, JUDE, M.D., 15, Rue Jeanne d'Arc, Rouen, France.

1878 HUSBAND, WALTER EDWARD, Royal United Hospital, Bath.

1859 HUTCHINSON, JONATHAN, F.R.C.S., Surgeon to the London Hospital; 15, Cavendish square, W. *Council*, 1869-71. *Vice-Pres.* 1881.

1861 HUTTON, CHARLES, M.D., Physician to the General Lying-in Hospital; 26, Lowndes street, Belgrave square, S.W.

1877 ILOTT, JAMES JOHN, L.R.C.P. Ed., Resident Medical Officer, Whitechapel Union Infirmary, Baker's row, E.

1879 INKSON, JAMES, M.D., Surgeon-Major, Army Medical Department; 15, Prospect row, Old Brompton, Chatham. *Hon. Loc. Sec.*

Elected

1876 IRWIN, JOHN ARTHUR, M.D., M.A., Brooks's Bar, Manchester.

1864 JACKSON, EDWARD, M.B., Surgeon to the Sheffield Hospital for Women; Fern Bank, Glossop road, Sheffield. *Hon. Loc. Sec.*

1864 JACKSON, ROBERT, M.D., 53, Notting hill square, W.

1876 JAKINS, ISAAC NEGUS, 32, Osnaburgh street, Regent's park, N.W.

1873 JAKINS, WILLIAM VOSPER, L.R.C.P. Ed., Sturt street, Ballarat, Victoria. [Per Isaac N. Jakins, Esq., 32, Osnaburgh street, Regent's park.]

1872 JALLAND, ROBERT, Horncastle, Lincolnshire.

1878 JAMES, WALTER CULVER, M.D., M.Ch., 11, Marloes road, Kensington, W.

1877 JAMIESON, PATRICK, M.A., 3, St. Peter's street, Peterhead, Aberdeenshire.

1877 JENKS, EDWARD W., M.D., Professor of Medical and Surgical Diseases of Women and of Clinical Gynæcology, Chicago Medical College; 84, Lafayette avenue, Detroit, Michigan, U.S.

1877 JOHNSON, SAMUEL, M.D., 5, Hill street, Stoke-upon-Trent.

1879 JOHNSTON, WM. BEECH, M.D., 157, Jamaica road, Bermondsey, S.E.

1868 JONES, EVAN, Ty-Mawr, Aberdare, Glamorganshire. *Hon. Loc. Sec.*

1878 JONES, H. MACNAUGHTON, M.D., Physician to the Cork Maternity, and County and City of Cork Hospital for Diseases of Women and Children; St. Patrick's place, Cork.

1868 JONES, JOHN, 60, King street, Regent street, W.

1874 JONES, JOHN THOMAS, L.K.Q.C.P. I., 179, Brixton road, S.W.

1876 JONES, LESLIE, M.D., C.M., 3, Brighton parade, Blackpool.

1873 JONES, PHILIP W., Silver street, Enfield, Essex.

1873 JONES, THOMAS DERRY, L.R.C.P. Ed., 328, Upper street, Islington, N.

Elected

1868 JORDAN, WILLIAM ROSS, Surgeon to the Birmingham Hospital for Women; Manor House, Moseley, near Birmingham.

1879 JOUBERT, CHARLES HENRY, M.D., care of Messrs. Lyall, Rennie and Co., Calcutta.

1878 JUDSON, THOMAS ROBERT, Hayman's Grern, West Derby, Liverpool.

1875 JUKES, AUGUSTUS, M.B. Trin. Coll. Toronto; St. Catherine's, Ontario.

1878 KANE, NATHANIEL H. K., M.D., Lanherne, Kingston hill, Surrey.

1880 KEBBELL, ALFRED, Flaxton, York.

O.F. KEELE, GEORGE THOMAS, 81, St. Paul's road, Highbury, N.

1874 KEMPSTER, WILLIAM HENRY, L.R.C.P. Ed., Oak House, Bridge road, Battersea.

1879 KER, HUGH RICHARD, L.R.C.P. Ed., Roxburghe House, Old hill, near Dudley.

1865* KERNOT, GEORGE CHARLES, M.D., 5, Elphinstone road, Hastings, Sussex.

1872 KERR, NORMAN S., M.D., F.L.S., 42, Grove road, Regent's park, N.W.

1877 KERSWILL, GEORGE, Looe, Liskeard, Cornwall.

1877 KERSWILL, JOHN BEDFORD, M.R.C.P. Ed., Fairfield, St. German's, Cornwall.

1878 KHORY, RUSTOMJEE NASERWANJEE, M.D. Brussels, L.Med. Bombay, Physician to the Parell Dispensary, Bombay, Lecturer to Native Midwives, Grant Medical College, Bombay.

O.F. KIALLMARK, HENRY WALTER, 5, Pembridge gardens, Bayswater. *Council*, 1879-80.

1869 KINGSFORD, C. DUDLEY, M.D., 12, Clapton Common, Upper Clapton, N.E. *Council*, 1879-80.

1860 KINGSFORD, EDWARD, F.R.C.S., Surgeon to the Sunbury Dispensary; Sunbury, Middlesex.

1862 KIRKPATRICK, JOHN RUTHERFORD, M.B. Dubl., Examiner in Midwifery, Royal College of Surgeons, Ireland; 4, Upper Merrion street, Dublin. *Council*, 1872-4.

Elected

1872* KISCH, ALBERT, 3, Sutherland gardens, Maida vale, W.

1867 KNAGGS, HENRY GUARD, M.D., 189, Camden road, N.W.

1877 KNIGHT, CHARLES FREDERICK, 34, Claremont square, N.

1876 KNOTT, CHARLES, L.R.C.P. Ed., Ashford House, Mile End, Portsmouth.

1876 LANCHESTER, HENRY THOMAS, M.D., Park House, Park lane, Croydon, Surrey.

1878 LANG, ALEX. M., M.B., 51, Warwick road, South Kensington.

1867 LANGFORD, CHARLES P., 29, Duncan terrace, Islington, N.

O.F. LANGMORE, JOHN CHARLES, M.B., F.R.C.S., 20, Oxford terrace, Hyde park, W. *Council*, 1861-64. *Vice-Pres.* 1869-71.

1872 LATTEY, JAMES, 23, St. Mary Abbott's terrace, Kensington, W.

1875 LAWRENCE, ALFRED EDWARD AUST, M.D., Physician-Accoucheur to the Bristol General Hospital; 15, Richmond hill, Clifton, Bristol.

1878 LEACHMAN, ALBERT WARREN, M.D., Fairley, Peterafield, Hants.

1876 LEIGHTON, WALTER HENRY, M.D., Lowell, Massachusetts, U.S.

1860 LEISHMAN, WILLIAM, M.D., Physician to the University Lying-in Hospital, Regius Professor of Midwifery in the University of Glasgow; 11, Woodside crescent, Glasgow. *Council*, 1866-68. *Vice-Pres.* 1869-70.

1874 LEWIS, CHARLES FRANCIS, L.R.C.P. Ed., Bromfield's, Henfield, Sussex.

1874 LEWIS, HENRY HARMAN DENDY, 120, Drummond street, Euston square, N.W.

1877 LEWIS, JOHN RIGGS MILLER, M.D., Deputy-Surgeon General, Woodlands, Queen's road, Norbiton, S.W.

1875 LIEBMAN, CARLO, M.D. Vienna, Principal Surgeon, Trieste Civil Hospital, Trieste, Austria.

Elected

1876 LILLEY, GEORGE HERBERT, M.D., M.R.C.P., Assistant Surgeon H.M.'s Convict Prison, Parkhurst; Bedford place, Newport, Isle of Wight.

1873 LINDSAY, W. B., M.D., Strathroy, Ontario, Canada.

1874 LITHGOW, ROBERT ALEXANDER DOUGLAS, L.R.C.P. Ed., 13, North Brink, Wisbech, Cambridgeshire.

1868 LLEWELLYN, EVAN, L.R.C.P. Ed., 9, Mount place, London Hospital, E.

1872* LOCK, JOHN GRIFFITH, M.A., Lansdowne House, Tenby.

1859 LOMBE, THOMAS ROBERT, M.D., Bemerton, Torquay.

1870 LONG, MARK, M.D., 185, Amhurst road, Hackney, N.E.

1878 LORIMER, JOHN ARCHIBALD, 33, Castle street, Farnham.

1874 LOUTTIT, JAMES, M.D., Trafalgar road, Greenwich, S.E.

1872 LOVEGROVE, JAMES F., New Zealand.

1876 LOVETT, HENRY ALBERT, Tasmania.

1862 LOWE, GEORGE, F.R.C.S., 5, Horninglow street, Burton-on-Trent, Staffordshire.

1866 LUCEY, WILLIAM CUBITT, M.D., The Elms, Bushhill Park, Enfield.

1873 LUSH, WILLIAM JOHN HENRY, F.R.C.P.Ed., Associate of King's College, London; Fyfield House, Andover.

1878* LYCETT, JOHN ALLAN, The "Hollies," Graiseley, Wolverhampton.

1869 LYDALL, WYKEHAM H., L.R.C.P. Ed., 19, Mecklenburgh square, W.C.

1871 MCCALLUM, DUNCAN CAMPBELL, M.D., Professor of Midwifery and Diseases of Women and Children, McGill University; Physician to the University Lying-in Hospital; and Physician to the Montreal General Hospital; Montreal, Canada.

1878 MACDONALD, ALBERT ANGUS, M.B., 169, Queen street West, Toronto, Canada.

1873 MACDONALD, JOHN ALEXANDER, M.D., Woburn, Bedfordshire.

Elected

1879 MacGrath, William Michael, L.K.Q.C.P.I., 32, Colville terrace, Bayswater, W.

1879 Mackeough, George J., M.D., Chatham, Ontario, Canada.

O.F. Mackinder, Draper, M.D., Consulting-Surgeon to the Gainsborough Dispensary; Gainsborough, Lincolnshire. *Council*, 1871-3.

1879 Maclaurin, Henry Normand, M.D., 187, Macquarie street, Sydney.

1877 Maclean, Norman Collier, M.D.

1872 MacMordie, William Kirkpatrick, M.D., 1, College square east, Belfast.

1879 Macneilage, David, L.R.C.P. Ed., 15, Whitworth terrace, Spennymoor, Durham.

1879 MacSwinney, George Henry, M.D., Westall House, Brook green, Hammersmith.

1859 Madge, Henry M., M.D., 4, Upper Wimpole street, W. *Council*, 1863-65. *Vice-Pres.* 1872-4.

1871 Malins, Edward, M.D., Obstetric Physician to the General Hospital, Birmingham; 8, Old square, Birmingham. *Council*, 1881.

1876 Manby, Frederick Edward, 10, King street, Wolverhampton.

1876 Manders, Horace, 1, York terrace, York town, Farnborough Station.

1868 March, Henry Colley, M.D., 2, West street, Rochdale.

1860 Marley, Henry Frederick, Padstow, Cornwall.

1862 Marriott, Robert Buchanan, Swaffham, Norfolk.

1880 Marsh, Thomas Charles, 56, Fitzroy street, Fitzroy square, W.

1876 Marshall, Francis John, Resident Medical Officer to St. George's Hospital.

1873 Martin, Henry Charrington, M.B., C.M., 11, Somers place, Hyde park, W.

Elected

1875 MASON, JOHN WALLIS, 1, Osnaburgh terrace, Regent's park, W.

1877 MASON, SAMUEL BUTLER, L.R.C.P. Ed., Denham House, 11, Park terrace, Pontypool, Monmouthshire.

1877 MAUNSELL, H. WIDENHAM, A.M., M.D., Pitt and London street, Dunedin, New Zealand.

1877 MAY, LEWIS JAMES, 371, Holloway road, N.

O.F. MEADOWS, ALFRED, M.D., Physician-Accoucheur to, and Lecturer on Midwifery at, St. Mary's Hospital; 27, George street, Hanover square, W. *Council*, 1862-64. *Hon. Sec.* 1865-66. *Hon. Lib.* 1865. *Treas.* 1867-69. *Vice-Pres.* 1874-6.

1875 MILES, ABIJAH J., M.D., Professor of Diseases of Women and Children in the Cincinnati College of Medicine, Cincinnati, Ohio, U.S.

1871 MILLER, HUGH, M.D., Physician-Accoucheur to the Glasgow Maternity Hospital; 298, Bath crescent, Bath street, Glasgow.

1876 MILLMAN, THOMAS, M.D., Asylum for the Insane, London, Ontario, Canada.

1880 MILLS, ROBERT JAMES, M.B., M.C., All Saints' Green, Norwich.

1876 MILSON, RICHARD HENRY, M.D., 88, Finchley road, South Hampstead, N.W.

1869 MILWARD, JAMES, 27, Charles Street, Cardiff.

1869 MINNS, PEMBROKE R. J. B., M.D., Thetford, Norfolk.

1867 MITCHELL, ROBERT NATHAL, M.D., Chester House, Wickham road, Lewisham High road, S.E.

1873 MONCKTON, MARSHALL, L.F.P.S. Glasg., Lenham, near Maidstone, Kent.

1868 MOOTHOOSAWMY MOODELLY, P. S., M.D., F.L.S., Native Surgeon, Uncovenanted Service, and Teacher of Midwifery, L. F. Midwifery, Manargoodi, Tanjore District, Madras Presidency.

1877 MOON, FREDERICK, M.B., Bexley house, Greenwich.

1873 MOON, ROBERT HENRY, F.R.C.S., Fern Lodge, Lower Norwood.

Elected

1879 MOORE, GEORGE EDWARD, M.B., Maidenhead.

1869 MOORE, JOSEPH, M.D., Counser villa, Balham, S.W.

1859 MOORHEAD, JOHN, M.D., Surgeon to the Weymouth Infirmary and Dispensary; Weymouth, Dorset.

1879 MOULLIN, JAMES A. MANSELL, M.A., M.D., 17, George street, Hanover square, W.

1878 MOWAT, GEORGE, Longland House, Swansea.

1878 MUIR, JAMES C. P., L.R.C.P. Ed., 44, Cornwall road, Westbourne park.

1877 MURPHY, JAMES, M.D., 3, Borough road terrace, Sunderland.

O.F. MURRAY, GUSTAVUS CHARLES P., M.D., Obstetric Physician to the Great Northern Hospital; 66, Great Cumberland place, Hyde park, W. *Council*, 1864-65. *Hon. Sec.* 1866-69. *Vice-Pres.* 1870-72. *Treas.* 1873-77.

1877 MURRAY, J. JARDINE, 99, Montpelier road, Brighton.

O.F. MUSGRAVE, JOHNSON THOMAS, L.R.C.P. Ed., Irlam villa, 39, Finchley road, N.W. *Council*, 1859-60.

1875 MUSGRAVE, REGINALD VERNON, Peninsula and Oriental Company's Service, Australia.

1880 NALL, SAMUEL, St. Bartholomew's Hospital, E.C.

1859 NAPPER, ALBERT, Broad Oak, Cranleigh, Guildford, Surrey. *Council*, 1866-68.

1863 NASON, JOHN JAMES, M.B. Lond., 11, Bridge street, Stratford-on-Avon.

1859 NEAL, JAMES, M.D., late Hon. Surgeon to the Lying-in Hospital, Birmingham; Barcelona House, Sandown, Isle of Wight.

1866 NEILD, JAMES EDWARD, M.D., Lecturer on Forensic Medicine, Melbourne University; 166, Collins street east, Melbourne.

1876 NESBITT, DAWSON, M.D., 34, Cambridge place, Hyde Park, W.

1876 NEWHAM, JAMES, 16, Princes street, Cavendish square, W.

Elected

1859 NEWMAN, WILLIAM, M.D., Surgeon to the Stamford and Rutland Infirmary; Barn Hill House, Stamford, Lincolnshire. *Council*, 1873-75. *Vice-Pres.* 1876-77.

1878 NICHOLLS, FREDERICK, Toronto Cottage, South Croydon.

1873 NICHOLSON, ARTHUR, M.B. Lond., 98, Montpellier road, Brighton.

1879 NICHOLSON, EMILIUS ROWLEY, M.D., 89, Camden road, N.W.

1876 NIX, EDWARD JAMES, M.D., 143, Great Portland street, W.

1876 OAKES, CHARLES, M.B. and C.M., The Parade, Leamington.

1880 OAKLEY, JOHN, Holly House, Wood's End, Halifax, Yorkshire.

1868 OATES, PARKINSON, M.D., 164, Cambridge street, Eccleston square, S.W.

1876 OGSTON, FRANCIS, Junr., M.D., 16, Bridge street, Aberdeen.

O.F. OLDHAM, HENRY, M.D., F.R.C.P., Consulting Obstetric Physician to Guy's Hospital; 4, Cavendish place, Cavendish square, W. *Vice-Pres.* 1859. *Council*, 1860, 1865-66. *Treas.* 1861-62. *Pres.* 1863-64. *Trustee.*

1859 OLDHAM, JAMES, F.R.C.S., Consulting-Surgeon to the Brighton Lying-in Institution; 53, Norfolk square, Brighton. *Council*, 1866-68.

1878 O'NEILL, JOHN, M.D., Maldon, Victoria, Australia.

1869 ORD, GEORGE RICE, Streatham hill, Surrey. *Council* 1881.

1875 ORPEN, ARTHUR HERBERT, A.B., L.K.Q.C.P.S., Woodstock, Oxfordshire.

1880 ORTON, CHARLES, M.R.C.P. Ed., Newcastle-under-Lyme, Staffordshire.

1877 OSTERLOH, PAUL RUDOLPH, M.D. Leipzic; Dresden.

1877 OSTLERE, ROBERT, M.B., C.M., 28, Stoke Newington road, N.

1863 OSWALD, JAMES WADDELL JEFFRIES, M.D., 245, Kennington road, S.E.

1880 OUTHWAITE, WILLIAM, Herbert House, Denmark Hill, S.E.

1878 OWEN, OWEN ELIAS, L.R.C.P. Ed., Brynsiencyn, Anglesey.

Elected

1875 OWEN, WILLIAM, 18, Old Ford street, Bow, E.

1877 PALMER, MONTAGU H. C., London road, Newbury, Berks.

1877 PARAMORE, RICHARD, 18, Hunter street, Brunswick square, W.C.

1873 PARKER, ROBERT WILLIAM, 8, Old Cavendish street, W.

1867 PARKS, JOHN, The Wylde, Bury, Lancashire.

1873 PARKS, LUTHER, A.M., M.D., 1, Place Duplaa, Pau, France. [Agents: Messrs. Baring Brothers & Co., 8, Bishopsgate street within, E.C.]

1872 PARR, GEORGE, M.D., 18, Upper Phillimore place, Kensington, W.

1880 PARSONS, SIDNEY, 78, Kensington park road, W.

1874 PATERSON, ALEXANDER, M.D., Bahia, Brazil.

1865* PATERSON, JAMES, M.D., Hayburn Bank, Partick, Glasgow.

1879 PAULI, THEOPHILUS WILLIAM, L.R.C.P. Ed., Luton, Beds.

1874 PAYNE, WILLIAM S. HELE, 87, Queen's Road, Peckham, S.E.

1864 PEARSON, DAVID RITCHIE, M.D., 23, Upper Phillimore place, Kensington, W.

1871 PEDLER, GEORGE HENRY, 6, Trevor terrace, Rutland gate, S.W.

1880 PEDLEY, THOMAS FRANKLIN, Rangoon.

1880 PEEL, ROBERT, 130, Collins street east, Melbourne, Victoria.

O.F. PEIRCE, RICHARD KING, Surgeon to the Notting hill and Shepherd's Bush Dispensary, 94, Addison road, Kensington, W. *Council*, 1881.

1873 PEREZ, DIEGO, M.D., Montevideo, South America [*per* A. K. Mackinnon, Esq., 22, Norfolk terrace, Bayswater, W.]

1871 PERRIGO, JAMES, M.D., 163, Bleury street, Montreal, Canada. *Hon. Loc. Sec.*

1879* PESIKAKA, HORMASJI DOSABHAI, 23, Hornby row, Bombay.

1879 PHIBBS, ROBERT FEATHERSTONE, L.R.C.P.Ed., 30, Sutherland gardens, Maida vale, W.

Elected

1879 PHILLIPS, GEORGE RICHARD TURNER, 24, Leinster square, Bayswater, W.

1878 PHILPOT, JOSEPH HENRY, M.D., 26, South Eaton place, S.W.

1871 PHILPS, PHILIP GEORGE, 4, Queen's road, Peckham, S.E.

1876 PICARD, P. KIRKPATRICK, M.D., 59, Abbey road, St. John's Wood, N.W.

1874 PIGG, THOMAS, M.D., Physician to the Manchester Southern Hospital for Women and Children; 75 Piccadilly, Manchester.

1876 PIGGOT, ALLEN, L.R.C.P. Ed., Bourneville Lodge, Beckenham, Kent.

1866 PILCHER, WILLIAM JOHN, 43, High street, Boston, Lincolnshire.

1864 PLAYFAIR, W. S., M.D., F.R.C.P., Physician Accoucheur to H.I. & R.H. the Duchess of Edinburgh; Professor of Obstetric Medicine in King's College, and Obstetric Physician to King's College Hospital; 31, George street, Hanover Square, W. *Council*, 1867. *Hon. Librarian*, 1868-9. *Hon. Sec.* 1870-72. *Vice-Pres.*, 1873-5. *Pres.* 1879-80.

1880 POCOCK, FREDERICK ERNEST, M.D., 20, Golborne road, Westbourne park. W.

O.F.* POLLARD, WILLIAM, Surgeon to the Torbay Hospital; Southlands, Torquay, Devon.

1877 POOLE, S. WORDSWORTH, M.D., Dunedin, Sidcup, Kent.

1876 POPE, H. CAMPBELL, M.B. Lond., Broomsgrove Villa, 280, Gold Hawk road, Shepherd's Bush, W.

1864 POTTER, JOHN BAPTISTE, M.D., Obstetric Physician to, and Lecturer on Midwifery and the Diseases of Women at, the Westminster Hospital; 20, George street, Hanover square, W. *Council*, 1872-6. *Hon. Lib.* 1877-8. *Vice-Pres.* 1879-81.

1875 POWDRELL, JOHN, 160, Euston road, N.W.

1863 POWELL, JOSIAH T., M.D., 347, City road, E.C.

1864 PRICE, WILLIAM NICHOLSON, Lecturer on Midwifery and the Diseases of Women and Children at the Leeds School of Medicine; Mount Pleasant, Leeds. *Council*, 1876-8,

Elected

1880 PRICKETT, MARMADUKE, M.D., 43, Albion street, Hyde park.

O.F. PRIESTLEY, WILLIAM O., M.D., F.R.C.P., Consulting Obstetric Physician to King's College Hospital; and Consulting Physician-Accoucheur to the St. Marylebone Infirmary; 17, Hertford street, Mayfair, W. *Council*, 1859-61, 1865-66. *Vice-Pres.* 1867-69. *Pres.* 1875-76.

1876 QUIRKE, JOSEPH, L.R.C.P. Ed., The Oaklands, Hunter's lane, Handsworth, Birmingham.

O.F. RADFORD, THOMAS, M.D., Consulting Physician to St. Mary's Hospital, Manchester; Moor field, Higher Broughton, Manchester. *Vice-Pres.* 1859.

1879 RAITT, THOMAS, M.D., Hill house, Woolwich, Kent, S.E.

O.F. RANDALL, JOHN, M.D., Lecturer on Medical Jurisprudence, St. Mary's Hospital Medical School; Medical Officer, St. Marylebone Infirmary; 35, Nottingham place, W. *Council*, 1877.

1861 RASCH, ADOLPHUS A. F., M.D., Physician for Diseases of Women to the German Hospital; Physician to the Training Hospital, Tottenham; 7, South street, Finsbury square, E.C. *Council*, 1871-3.

1878 RAWLINGS, JOHN ADAMS, M.R.C.P. Ed., 4, Northampton terrace, Swansea.

1870 RAY, EDWARD REYNOLDS, Dulwich, Kent, S.E.

1860* RAYNER, JOHN, M.D., Swaledale House, Quadrant road north, Highbury New Park, N.

1859 RAYNES, HENRY, Gringley-on-the-hill, Bawtry, Yorkshire.

1871 READ, CHARLES, M.B., 1, St. George's square, Regent's park road, N.W.

1879 READ, THOMAS LAURENCE, 11, Petersham terrace, Queen's gate, S.W.

1874 REES, WILLIAM, Priory House, 129, Queen's crescent, Haverstock hill, N.W.

1879 REEVE, HENRY, 24, White Horse lane, E.

1879 REID, WILLIAM LOUDON, M.D., 7, Royal crescent, Glasgow.

1879 RENDLE, RICHARD, 113, Queen street, Queensland, Australia.

Elected

1875* REY, EUGENIO, M.D. of Turin, 39, Via Cavour, Turin.

1862 RICHARDS, DAVID, 23, St. George's terrace, Kemp Town, Brighton, Sussex.

1880 RICHARDS, GEORGE, L.R.C.P. Ed., Mervyn Lodge, Ashfields, Ross, Herefordshire.

1862 RICHARDS, S. SMITH C., 36, Bedford square, W.C.

O.F. RICHARDSON, RICHARD, L.R.C.P. Ed., Bryngwy, Rhayader, Radnorshire.

1872 RICHARDSON, WILLIAM L., M.D., A.M., Instructor in Obstetrics in Harvard University; Visiting Physician to the Boston Lying-in Hospital; 76, Boylston street, Boston, Massachusetts, U.S.

1872 RIGDEN, GEORGE, Surgeon to the Canterbury Dispensary; 60, Burgate street, Canterbury.

1871 RIGDEN, WALTER, 8, Montpelier square, S.W.

O.F.* ROBERTS, DAVID LLOYD, M.D., Physician to St. Mary's Hospital, Manchester; 23, St. John's street, Deansgate, Manchester. *Council,* 1868-70, 1880-1. *Vice-Pres.* 1871-2. *Hon. Loc. Sec.*

1867 ROBERTS, DAVID W., M.D., 56, Manchester street, Manchester square, W.

1860 ROBERTS, ROBERT PRICE, Shamrock House, Rhyl, Flintshire.

1874 ROBERTSON, WILLIAM BORWICK, M.D., West Dulwich, S.E.

O.F. ROBINSON, THOMAS, M.D., 5, Woburn square, W.C.

1876 ROE, JOHN WITHINGTON, M.D., Ellesmere, Salop.

O.F. ROGERS, WILLIAM RICHARD, M.D., Physician to the Samaritan Free Hospital; 56, Berners street, Oxford street, W. *Council,* 1870-72.

1874 ROOTS, WILLIAM HENRY, Canonbury House, Kingston-on-Thames.

1860 ROPER, ALFRED GEORGE, 57, North End, Croydon, Surrey. *Council,* 1879. *Hon. Loc. Sec.*

1874 ROPER, ARTHUR, 17, Granville park, Blackheath.

Elected

1865 ROPER, GEORGE, M.D., Physician to the Royal Maternity Charity; Physician to the Hospital for Diseases of Children and Women, Waterloo Bridge road; 7, Queen Anne street, Cavendish square, W. *Council*, 1875-77. *Vice-Pres.* 1879-81.

1859 ROSE, HENRY COOPER, M.D., High street, Hampstead, N.W. *Council*, 1875-77.

1880 ROSS, DAVID PALMER, M.D., Kingston, Jamaica.

1879 ROSS, FREDERICK OGILBY, B.A., M.B., the Peninsular and Oriental Company's Ship "Jumar" [care of Mr. John Adams, 49, Oxford Street, Southampton].

O.F. ROUTH, CHARLES HENRY FELIX, M.D., Physician to the Samaritan Free Hospital for Women and Children; 52, Montagu square, W. *Council*, 1859-61. *Vice-Pres.* 1874-6.

1874 ROWAN, THOMAS, L.R.C.P. Ed., Hon. Physician to the Lying-in Hospital, Melbourne, Victoria.

1870 RUSSELL, LOGAN D. H., M.D., 8, Alfred street, Gt. George street, Liverpool.

1866 SABOIA, V., M.D., Rio de Janeiro, South America.

1864 SALTER, JOHN H., D'Arcy House, Tolleshunt D'Arcy, Kelvedon, Essex.

1875 SALZMANN, FREDERICK WILLIAM; Senior Surgeon to the Hospital for Women; 18, Montpellier road, Brighton. *Council*, 1880-1. *Hon. Loc. Sec.*

1868* SAMS, JOHN SUTTON, St. Peter's Lodge, Eltham road, Lee, Kent.

1872 SANGSTER, CHARLES, 148, Lambeth road, S.E.

1870 SAUL, WILLIAM, M.D., 4, Charlotte street, Fitzroy square, W.

1863 SAVAGE, HENRY, M.D., Consulting Physician to the Samaritan Hospital for Women, Lower Seymour street, Portman square; 14, Bentinck street, W. *Council*, 1871-2.

1872 SAVAGE, THOMAS, M.D., Surgeon to the Birmingham and Midland Hospital for Women; 12, Old square, Birmingham. *Council*, 1878-80.

Elected

1877 SAVORY, CHARLES TOZER, M.D., 1, Douglas road, Canonbury, N.

1879 SCHOFIELD, RT. H. A., M.A., M.B. Oxon., 28, Cambridge gardens, Notting hill, W.

O.F. SCOTT, JOHN, F.R.C.S., 10, Tavistock square, W.C. *Council*, 1868-70. *Vice-Pres.* 1871-3.

1870 SCOTT, JOHN, M.D., New street, Sandwich.

1876 SCOVIL, FRANCIS S., 11, Norton road, Hove, Sussex.

1863 SEQUEIRA, HENRY LITTLE, 34, Jewry street, Aldgate, E.C., and Waltham Lodge, Tulse hill.

1866 SEQUEIRA, JAMES SCOTT, 68, Leman street, Goodman's fields, E.

1875 SETON, DAVID ELPHINSTONE, M.D., 12, Thurloe place, South Kensington.

1860 SEWELL, CHARLES BRODIE, M.D., 21, Cavendish square, W., and 13, Fenchurch street, E.C. *Council*, 1880-1.

1862 SHARMAN, MALIM, Surgeon to the Birmingham Free Hospital for Sick Children; 18, New Hall street, and Hollington, Bristol road, Birmingham.

O.F. SHARPIN, HENRY WILSON, F.R.C.S., Surgeon to the Bedford General Infirmary, Bedford. *Council*, 1871-3.

1869 SHAW, HENRY SISSMORE, 88, Upgate, Louth, Lincolnshire.

1875 SHELDON, EDWIN MASON, Surgeon to Stanley Hospital; 223, Boundary street, Liverpool.

1867 SHEPHERD, FREDERICK, L.R.C.P. Ed., 33, King Henry's road, Primrose hill, N.W.

1859 SHIPTON, WILLIAM PARKER, Consulting Surgeon to the Devonshire Hospital; Buxton, Derbyshire.

1874 SIMPSON, GEORGE ALEX. MALCOLM, M.D., Hampstead lane, Highgate, N.

1874 SINCLAIR, ALEXANDER DOULL, M.D., Visiting Physician to the Boston Lying-in Hospital; Member of the Board of Consulting Physicians and Surgeons, Boston City Hospital; 35, Newbury street, Boston, Massachusetts, U.S.

Elected

1876 SIRIGNANO, GIOSUE, M.D., 24, Strada Banchi Nuovi, Napoli.

1874 SKINNER, STEPHEN, M.B., Frendale, Clevedon, Somerset.

1879 SLIGHT, GEORGE. M.D., 25, Brewer street, Regent street.

1876 SLOAN, SAMUEL, M.D., C.M., 4, Newton terrace, Glasgow.

1861 SLOMAN, SAMUEL GEORGE, Farnham, Surrey.

1861 SLYMAN, WILLIAM DANIEL, 26, Caversham road, Kentish Town, N.W. *Council*, 1881.

1859 SMILES, WILLIAM, M.D., Surgeon to the House of Correction, Cold Bath Fields; 44, Bedford square, W.C. *Council*, 1879.

1877 SMITH, ARTHUR LAPTHORN, M.D., 41, Beaver Hall terrace, Montreal, Canada.

1876 SMITH, HENRY BARTON LIDDELL, M.B. and C.M., 29, Charles street, Berkeley square, W.

1867 SMITH, HEYWOOD, M.D., Physician to the Hospital for Women, Soho square, and Physician to the British Lying-in Hospital; 2, Portugal street, Grosvenor square, W. *Council*, 1872-5.

O.F. SMITH, PROTHEROE, M.D., Physician to the Hospital for Women, Soho square; 42, Park street, Grosvenor square, W.

1875 SMITH, RICHARD THOMAS, M.D., Assistant-Physician to the Hospital for Women, Soho square; 53, Haverstock hill, N.W.

1879 SMITH, WM. HUGH MONTGOMERY, L.R.C.P.Ed., 24, London road, West Croydon, Surrey.

1859 SMITH, WILLIAM JOHNSON, M.D., Consulting Physician to the Weymouth Infirmary and Dispensary; Greenhill, Weymouth, Dorset. *Council*, 1869-71.

1878 SMYTH, ALBERT CHARLES BUTLER, L.R.C.P. Ed., 1, Hillside, Crouch Hill, N.

1876 SNELL, EDMUND GEORGE CARRUTHERS, 131, Green street, Victoria park, E.

Elected

1866 SOPER, WILLIAM, Medical Officer, Jews' Hospital, Norwood; 4, Clapham rise [283, Clapham road], S.W.

1869 SPAULL, BARNARD, F.R.C.S., Essex House, Vale place, Hammersmith, W.

1868 SPAULL, BARNARD E., 2, Vale place, Hammersmith, W.

1872 SPENCE, JAMES BEVERIDGE, M.D., Earlswood Asylum, Red Hill, Surrey.

1876 SPENCER, LIONEL DIXON, M.D., Bengal Army [care of Messrs. Grindlay and Co., 55, Parliament street].

1862 SPRY, G. FREDERICK HUME, Surgeon-Major 2nd Life Guards, Army and Navy Club, S.W.

1876 SPURGIN, FREDERICK WILLIAM, L.R.C.P. Ed., 14, Henrietta street, Cavendish square, W.

1876 SPURGIN, HERBERT BRANWHITE, 49, Abington road, Northampton.

1876 SPURRELL, FLAXMAN, L.R.C.P. Ed., Belvedere, Kent.

O.F. SQUIRE, WILLIAM, M.D., M.R.C.P., 6, Orchard street, Portman square, W. *Council*, 1866-68. *Vice-Pres.* 1876-77.

1877 STAINTHORPE, WILLIAM WATERS, M.D., C.M., Bellingham, Northumberland.

1877 STEPHENSON, WILLIAM, M.D., Professor of Midwifery, University of Aberdeen; 261, Union Street, Aberdeen. *Council*, 1881.

1873 STEWART, JAMES, M.D., 2, Skinner street, Whitby, Yorkshire.

1875* STEWART, WILLIAM, L.R.C.P. Ed., Highfield House, Barnsley, Yorkshire.

1876 STEWART, WILLIAM EDWARD, 16, Harley Street, W.

1879 STILWELL, ROBERT R., M.D., Beckenham, Kent.

1859 STONE, JOSEPH, M.D., 175, Upper Brook street, Manchester.

O.F. STOWERS, NOWELL, 125, Kennington park road, Kennington, S.E.

1866 STRANGE, WILLIAM HEATH, M.D., 2, Belsize avenue, Belsize park, N.W.

Elected

1871 STURGES, MONTAGUE J., M.D., Elmstone House, Beckenham, Kent.

1879 SUTCLIFFE, JOHN, 108, Denmark hill, S.E.

1880 SUTHERLAND, CHARLES JAMES, L.R.C.P. Ed., 16, Frederick street, South Shields.

1862 SUTTON, FIELD FLOWERS, M.D., Balham hill, Clapham, S.W.

1859 SWAYNE, JOSEPH GRIFFITHS, M.D., Physician-Accoucheur to the Bristol General Hospital; Harewood House, 74, Pembroke road, Clifton, Bristol. *Council*, 1860-61, *Vice-Pres.* 1862-64. *Hon. Loc. Sec.*

1859 SYMONDS, FREDERICK, M.A., F.R.C.S., Surgeon to the Radcliffe Infirmary; 35, Beaumont Street, Oxford. *Council*, 1862-65. *Hon. Loc. Sec.*

1879 TAIT, EDWARD W., 54, Highbury park, N.

1871 TAIT, LAWSON, F.R.C.S., Surgeon to the Birmingham and Midland Hospital for Women; Consulting Surgeon to the West Bromwich Hospital; 7, Great Charles street, Birmingham.

1880 TAKAKI, KANAHEIRO, F.R.C.S., Imperial Naval Hospital, Tokio, Japan. *Hon. Loc. Sec.*

1871 TANNER, JOHN, M.D., F.L.S., Physician for Diseases of Women, to the Farringdon General Dispensary, and Obstetric Physician to the Lying-in Charity, Holborn; 102, Harley street.

1859 TAPSON, ALFRED JOSEPH, M.B. Lond., 36, Gloucester gardens, Westbourne terrace, W. *Council*, 1862-64.

1863 TAPSON, JOSEPH ALFRED, Surgeon to the Clapham General Dispensary; 83, High street, Clapham, S.W.

1871 TAYLER, FRANCIS T., B.A. Lond., and M.B., Claremont villa, 224, Lewisham high road, S.E.

O.F. TAYLOR, EDWARD, South lodge, Clapham common, S.W.

O.F. TAYLOR, CHARLES, M.D., Pine house, Camberwell green, S.E. *Council*, 1869-71.

1869 TAYLOR, JOHN, Earl's Colne, Halstead, Essex.

1871 TAYLOR, JOHN W., M.D., 34, Queen street, Scarborough.

Elected

1878 TAYLOR, JOSEPH OGILVIE, Cottage Place, Chelmsford.

1862 TAYLOR, THOMAS, F.R.C.S., 5, Wellington terrace, Sutton Coldfield, Birmingham. *Council*, 1875-77.

1872 TEMPLE, JAMES ALGERNON, M.D., Professor of Obstetrics, Trinity College; Physician to Toronto General Hospital; Physician Accoucheur to the Burnside Lying-in-Hospital; 191, Simcoe street, Toronto. *Hon. Loc. Sec.*

1862 THANE, GEORGE DANCER, M.D., 15, Montague street, Russell square, W.C. *Council*, 1881.

1880 THOMPSON, HENRY, Assistant Surgeon, Hull General Infirmary, 16, Albion street, Hull.

1870 THOMPSON, JOHN ASHBURTON, M.D. (travelling). *Council*, 1877-8.

1867 THOMPSON, JOSEPH, 24A, Regent street, Nottingham.

1878 THOMSON, DAVID, M.D., 17, Market hill, Luton, Bedfordshire.

1880 THOMSON, JOHN ANSTRUTHER MELVILLE, Bridge House, Newport, Shropshire.

1874 THOMSON, WILLIAM SINCLAIR, M.D., Consulting Surgeon, Peterborough Infirmary, Westgate, Peterborough.

1878 THOMSON, WILLIAM ARNOLD, F.R.C.S.I., Wembly, Sudbury, Middlesex.

1867 THORBURN, JOHN, M.D., M.R.C.P., Professor of Obstetric Medicine, Owen's College, Manchester; 62, King street, Manchester. *Council*, 1876-78. *Vice. Pres.* 1881.

1860 THORNE, GEORGE LEWORTHY, M.B., Lenham, near Maidstone, Kent.

1879 THORNTON, J. KNOWSLEY, M.B., C.M., 83, Park street, Grosvenor square.

1867 THORNTON, WILLIAM HENRY, Surgeon to the Royal National Hospital for Scrofula; Berkeley Lodge, Margate.

1874 TICEHURST, AUGUSTUS ROWLAND, Petersfield, Hants.

1873 TICEHURST, CHARLES SAGE, Petersfield, Hants.

1860 TIFFEN, ROBERT, M.D., Wigton, Cumberland.

1866 TILLEY, SAMUEL, The Cedars, Cranford, Middlesex.

Elected

O.F. TILT, EDWARD JOHN, M.D., Consulting Physician-Accoucheur to the Farringdon General Dispensary; 27, Seymour street, Portman square, W. *Council*, 1867-68. *Vice-Pres.* 1869-70. *Treas.* 1871-2. *Pres.* 1873-4.

1879 TIVY, WILLIAM JAMES, F.R.C.S. Ed., 1, Tottenham place, Clifton.

1872 TOLOTSCHINOFF, N., M.D., Kieff, Russia [*per* M. N. Orloff, 13, Cambridge terrace, Walham green, S.W.].

1869 TOMKINS, CHARLES P., L.K.Q.C.P.I., Beddington park, Croydon.

1870 TOWNE, ALEXANDER, Junr., 364, The Crescent, Kingsland road, N.E.

1873 TRESTRAIL, HENRY ERNEST, F.R.C.S., M.R.C.P. Ed., 6, Trinity terrace, Victoria road, Aldershot.

1872 TUCHMANN, MARO, M.D., 148, Adelaide road, Haverstock hill, N.W.

1865 TURNER, JOHN SIDNEY, Surgeon to the Anerley Dispensary; Stanton House, Anerley road, Upper Norwood, Surrey.

1861 TWEED, JOHN JAMES, Junr., F.R.C.S., 14, Upper Brook street, W.

1874 UNDERHILL, THOMAS, M.D., Summerfield, West Bromwich, Staffordshire.

1874 VENN, ALBERT JOHN, M.D., Obstetric Physician, Metropolitan Free Hospital; Assistant Physician, Victoria Hospital for Sick Children; 8, Upper Brook street, Grosvenor square, W.

1880 VERDON, WALTER, F.R.C.S., 410, Brixton road, S.W.

1873 VERLEY, REGINALD LOUIS, F.R.C.P. Ed., 88, Gower street, W.C.

1879 WADE, GEORGE HERBERT, M.R.C.P., Chislehurst, Kent.

1864 WAHLTUCH, ADOLPHE, M.D., 326, Oxford street, Manchester.

1860 WALES, THOMAS GARNEYS, Downham Market, Norfolk.

1877 WALKER, GEORGE, L.R.C.P., M.R.C.S., 12, Lingfield road, Wimbledon.

Elected

1866 WALKER, THOMAS JAMES, M.D., Surgeon to the General Infirmary, Peterborough; 18, Westgate, Peterborough. *Hon. Loc. Sec. Council*, 1878-80.

1873 WALKER, THOMAS OSBORNE, Crick, near Rugby, Northamptonshire.

1870 WALLACE, FREDERICK, District Surgeon to the Royal Maternity Charity; 243, Hackney road, N.E. *Council*, 1880-1.

1872 WALLACE, JOHN, M.D., Assistant-Physician to the Liverpool Lying-in Hospital; 1, Gambier terrace, Liverpool. *Hon. Loc. Sec.*

1879* WALTER, WILLIAM, M.D., St. Mary's Hospital, Manchester.

1867 WALTERS, JAMES HOPKINS, 43, Castle street, Reading, Berks.

1873 WALTERS, JOHN, M.B., Church street, Reigate, Surrey.

O.F. WANE, DANIEL, M.D., 20, Grafton street, Bond street, W.

1859 WARDEN, CHARLES, M.D., Hon. Surgeon to the Birmingham Lying-in Hospital; 39, Temple street, Birmingham.

1862 WATKINS, CHARLES STEWART, 16, King William street, Strand, W.C.

1873 WAY, JOHN, M.D., 4, Eaton square, S.W.

1879 WEATHERLY, LIONEL ALEX., M.D., C.M. Aberd., Portishead, Somersetshire.

1867 WEBB, FRED. E., 113, Maida vale, W.

O.F. WEBB, HENRY SPEAKMAN, Welwyn, Herts.

1872 WEBSTER, THOMAS, Malvern House, Redland, near Bristol.

1876 WEIR, ARCHIBALD, M.D., St. Mungho's, Great Malvern.

1867 WELLER, GEORGE, The Mall, Wanstead, Essex.

1876 WELLS, FRANK, M.D., late Professor of Obstetrics and the Diseases of Women and Children in the Cleveland Medical School; 12, West Cedar street, Boston, Massachusetts.

Elected

1874 WELLS, HARRY, M.D., H.B.M. Vice-Consul, Gualeguaychu, Entre Rios, Argentine Confederation.

O.F. WELLS, T. SPENCER, F.R.C.S., Surgeon in Ordinary to H.M.'s Household; Surgeon to the Samaritan Free Hospital for Women and Children; 3, Upper Grosvenor street, W. *Council*, 1859. *Vice-Pres.* 1868-70. *Trustee.*

1859 WESTMACOTT, JOHN GUISE, M.D., Medical Officer to the Paddington Provident Dispensary; Howley House, 39, Howley place, Paddington, W.

1876 WHARTON, HENRY THORNTON, M.A. Oxford, 39, St. George's road, Kilburn, N.W.

1870 WHEATCROFT, SAMUEL HANSOM, L.R.C.P. Ed., Litchham, Swaffham, Norfolk.

1860 WHEELER, DANIEL, Chelmsford, Essex.

1877 WHITE, EDWARD, M.D., Terrace, 69, Summer hill, Birmingham.

1873 WHITE, FREDERICK BROAD, 15, Maida vale, W.

1860 WHITE, FREDERICK GEORGE, L.R.C.P. Ed., Castle House, Chepstow, 8, Chislehurst villas, Mount Ararat road, Richmond, Surrey.

1877 WIGMORE, WILLIAM, 130, Inverness terrace, Hyde park, W.

1867 WILBE, RICHARD HAYDOCK, M.D., York Lodge, 21, Finchley road, St. John's Wood, N.W.

1879 WILKIN, JOHN FREDERICK, M.D., Beckenham, Kent.

1876 WILKINSON, JOSEPH CRADOCK, 2, Bellevue terrace, Crouch End, Hornsey, N.

1871 WILKINSON, WILLIAM HENRY WHITEWAY, L.R.C.P. Ed., 268, Caledonian road, N.

1879 WILLANS, WILLIAM BLUNDELL, F.R.C.P. Ed., Great Hadham, Herts.

1879 WILLETT, CHARLES VERRALL, Brandon, Suffolk.

1861 WILLIAMS, ARTHUR WYNN, M.D., Physician to the Samaritan Free Hospital; 1, Montagu square, W. *Council* 1871.

Elected

1864 WILLIAMS, EDWARD, M.D., Holt street House, Wrexham.

1867 WILLIAMS, HENRY LLEWELLYN, M.D., 9, Leonard place, Kensington, W.

1872 WILLIAMS, JOHN, M.D., F.R.C.P., Assistant-Obstetric Physician to University College Hospital; 28, Harley street, Cavendish square, W. *Council*, 1875-76. *Hon. Sec.* 1877-9. *Vice-Pres.* 1880-1.

1880 WILLMOTT, JULIUS JOHN EARDLEY, M.D., Weston-super-Mare and St. Bartholomew's Hospital.

1859 WILSON, JAMES GEORGE, M.D., Professor of Midwifery in the Andersonian University, Glasgow; Consulting Physician-Accoucheur to the Glasgow Maternity Hospital; 9, Woodside crescent, Glasgow. *Council*, 1863-64. *Vice-Pres.* 1865-67.

1873 WILSON, JOHN HENRY, L.K.Q.C.P. Ireland, Obstetric Physician to the Ladies' Charity and Lying-in Hospital; Kensington Lodge, Kensington, Liverpool.

1860 WILSON, ROBERT JAMES, F.R.C.P. Ed., 7, Warrior square, St. Leonard's-on-Sea, Sussex. *Hon. Loc. Sec. Vice-Pres.* 1878-80.

1866 WILTSHIRE, ALFRED, M.D., F.R.C.P., Joint Lecturer on Midwifery at, and Assistant-Obstetric Physician to, St. Mary's Hospital, and Physician for the Diseases of Women to the West London Hospital; 57, Wimpole street, Cavendish square, W. *Council*, 1870. *Hon. Lib.* 1871-3. *Hon. Sec.* 1874-6. *Vice-Pres.* 1877-9.

1877 WINTLE, HENRY, M.B., 12, Park road villas, Forest hill, S.E.

1872 WISE, WILLIAM CLUNIE, M.D., Gothic villa, 241, Burrage road, Plumstead, S.E.

1880 WOODWARD, G. P. M., M.D., Puckeridge, Hertfordshire.

O.F. WORSHIP, J. LUCAS, Manor House, Riverhead, Sevenoaks, Kent. *Council*, 1875-77.

1876 WORTS, EDWIN, 6, Trinity street, Colchester.

1871 YARROW, GEORGE EUGENE, M.D., 87, Old street, E.C. *Council*, 1881.

Elected

1870 YEATES, GEORGE, M.D., Grove road, Walthamstow, Essex.

1874 YOUNG, DAVID, M.D., 13, Via dei Fossi, Florence, Italy [care of Mr. Lewis, Gower Street].

1861 YOUNG, WILLIAM BUTLER, 10, Castle street, Reading, Berks.

1869 YULE, JOHN S. C., Castlefield House, 78, Walmsey road, Bury, Lancashire.

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ADVERTISEMENT.

THE SOCIETY is not as a body responsible for the facts and opinions which are advanced in the following papers and communications read, or for those contained in the abstracts of the discussions which have occurred, at the meetings during the Session.

53, BERNERS STREET,
OXFORD STREET, W.

OBSTETRICAL SOCIETY

OF

LONDON.

SESSION 1880.

JANUARY 14TH, 1880.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—33 Fellows and 2 visitors.

Books were presented by Dr. William Fischer, Dr. William Goodell, Dr. Otto Spiegelberg, Mr. Lawson Tait, Dr. H. Vanden Bosch, University College, St. Bartholomew's Hospital, and the Melbourne University.

George Henry MacSwinney, M.D., was admitted a Fellow of the Society, and the following gentlemen were declared admitted:—George Harvey, L.R.C.P. Ed. (Wirksworth); David Macneilage, L.R.C.P. Ed. (Spennymoor, Durham); Theophilus William Pauli, L.R.C.P. Ed. (Luton); and William James Tivy, F.R.C.S. Ed. (Clifton).

The following gentlemen were proposed for election:—Francis J. Bailey, M.R.C.S. (Liverpool); Robert Bruce, M.R.C.S. (Old Street); and Thomas Hamilton, M.D. (Canonbury).

RUPTURE OF FALLOPIAN TUBE.

Dr. Godson showed for Mr. J. Kingston Barton the uterus, and its appendages, of a woman aged thirty, who had died from internal hæmorrhage. She had been married two months. Menstruation had been regular; the period commenced four days before her death, at its proper time. During this day, whilst walking, she suffered acute pain in the left iliac region, nearly fainting. This passed off, but recurred again three days after while still menstruating. Collapse and the general signs of internal hæmorrhage became manifest, and she died within twelve hours. The autopsy showed the abdominal cavity to be full of fluid blood, with large clots in the pelvic portion. The left Fallopian tube was found distended in one part to the size of a small walnut, on the anterior aspect of which was a small irregular rent, which led into a cavity in the centre of what appeared to be organised blood clots. No ovum could be discovered, and the uterus contained no decidual membrane. The right ovary showed a well-marked corpus luteum.

Mr. Barton had sent the specimen as one of tubal gestation and rupture, but Dr. Godson could trace no signs or symptoms of pregnancy. At the same time, he failed to account in any other way for the distension of the tube, both ends of which were patent. Had not death occurred the blood would have probably become encysted and have formed a large hæmatocele.

Dr. Edis thought that though the negative evidence of extra-uterine gestation was strong, it was not positively proved that it had not existed. The Fallopian tube was not only distended, but also thickened and developed. There was also a marked corpus luteum usually met with in pregnancy.

The President thought it looked like a tubal pregnancy, and suggested that a committee, consisting of Drs. Galabin, John Williams, and Godson, should examine and report upon the specimen.

MONSTER.

Dr. Harvey Hilliard showed a one-headed twin monster, the bodies of which were connected to below the single umbilicus, where they became distinct and perfect. A single head was placed on four shoulders, the only peculiar feature of which was a third ear between two occipital bones. The labour occurred at the seventh month, and was unattended by any difficulty, though the head, which presented, was detained somewhat long at the brim of the pelvis. The mother had given birth to three children previously, the second of which was born with hydrocephalus and the third with hypospadias.

SUPERFŒTATION.

The President showed for Mr. Clabburn, of Turnham Green, a specimen of supposed superfœtation. Dr. Playfair suggested that it might be a twin fœtus mummified.

Report on the Specimen exhibited by Dr. Heywood Smith.

The specimen had been kept in spirit. It consists of the body of the uterus, the Fallopian tube and ovaries, and portions of the round and broad ligaments. It measured from the fundus to the lowest part three inches. The peritoneal surface presented some shreds of membrane, apparently the product of inflammation. The Fallopian tubes are both closed at their external orifices, and converted into long tubular sacs. The uterine orifices of the tubes could not be examined. The right ovary is converted into a cyst, the size of a small walnut; the left is atrophied, and presents some traces of vesicles or corpora lutea.

The general thickness of the walls of the body of the uterus is from $1\frac{3}{4}$ to 2 inches. The interior part of this thickness, for about $1\frac{1}{8}$th inch, is composed of an opaque, white, somewhat friable tissue, readily distinguishable by the naked eye from the muscular tissue forming the outer part of the wall, from which it has a rather sharp line of demarcation. Its inner surface is ragged. On scraping the cut surface a copious milky juice is brought away. On microscopic examination this is found to consist of cells, single and in masses. The shape of the cells is very variable, but the majority are either round or have a more or less perfect columnar form.

Microscopic sections of the tissue show the appearance of proliferating glandular acini. The epithelial lining consists of cells, which are generally more or less columnar, but do not form a single layer, being heaped up to a variable thickness, and sometimes almost closing the lumen of the acinus. In many places the epithelial lining has grown up into processes, which unite with other processes and divide the dilated and irregular acinus into several compartments. Here and there an acinus appears to be completely filled with cells, which are no longer columnar, but rounded. The stroma intervening between the acini is generally infiltrated with nuclei. At one or two spots masses of cells, resembling those in the adjoining acini, are seen amongst the stroma, presenting an appearance as if either the cells from the acini had migrated into the stroma, or the nuclei of the stroma had grown into the similitude of the adjacent epithelial cells. The sections show the diseased tissue to have an abrupt margin. Very close to the margin a few clusters of small nuclei are seen among the muscular bundles, but there is no infiltration with epithelial cells beyond the limit reached by the acini.

Microscopic sections taken from the stump left after the operation show simply muscular tissue covered by a very thin layer of lymph and clot. There is no trace here of infiltration by the growth.

We are of opinion that the growth is a cylindrical epithe-

lioma (the "adenoid cancer" of Billroth, "columnar epithelioma" of Rindfleisch, "cylinder-epithelial carcinoma" of Wilks and Moxon), which shows some tendency to pass into a true medullary carcinoma. We find no evidence of infection of the tissues beyond the immediate vicinity of the manifest disease.

ALFRED L. GALABIN.
JOHN WILLIAMS.

ON THE PAIN IN PELVIC CANCER AND ITS RELIEF BY MORPHIA, ILLUSTRATED BY FIFTY CASES.

By FRANCIS HENRY CHAMPNEYS, M.A., M.B. Oxon., M.R.C.P.,
MEDICAL REGISTRAR TO ST. BARTHOLOMEW'S HOSPITAL;
PHYSICIAN TO THE OUT-PATIENTS AT THE SAMARITAN AND QUEEN CHARLOTTE'S HOSPITALS.

THE following study of pelvic cancer is offered as a contribution to the general knowledge of a disease, common as it is incurable, with the following objects:—First, of forming some basis for our choice of one or other of the different modes of administering morphia founded on fact; secondly and principally, of formulating our observation with regard to the frequency, duration, quality, locality, and severity of the pain, in malignant disease of the uterus and pelvic organs; on the principle of studying the phenomena of diseases even where we cannot foresee any immediate effect on practice, that is, so far as we can see, unpractically.

The opportunity for this study has been given me in the wards of St. Bartholomew's Hospital by the kindness of Dr. Matthews Duncan.

The cases have been such as offered themselves in the out-patient room of the hospital and have not been selected, but admitted in order. To the 50 cases thus admitted without selection I have added four others in an appendix,

since they offered some special feature of interest, but I have not included them in any statistics.

Although the notes which I have taken deal with other points, I have thought it best to confine myself in this communication to the subject of *pain* (including therein one or two other nervous phenomena) and its treatment by morphia; other points I hope to deal with hereafter. The dates range from March, 1878, to November, 1879. The cases themselves are given in an appendix. From them any statements may be confirmed or disproved.[1]

The *ages* of the patients ranged from twenty-four up to sixty-four; the average age was forty-three.

TABLE I.

Between 20 and 30	5
30 and 40	15
40 and 50	15
50 and 60	10
60 and 70	5
70	0
	50

The equality in numbers between the periods thirty to forty and forty to fifty is not according to the general rule that cancer is most frequent in the period forty to fifty.

About this, as it does not directly concern the subject in hand, I shall say no more.

The frequency of the occurrence of pain of some sort or another as the first symptom, compared with hæmorrhage or discharge, is shown in the following table.

TABLE 2.—*First symptom.*

Pain	in 13 cases,	or 26	per cent.
„ with hæmorrhage	in 8 „	or 16	„
Hæmorrhage	in 8 „	or 16	„
Discharge, offensive in 5 cases; „ not offensive in 2 cases	= in 7 „	or 14	„

[1] Omitted for want of space.

Pain, with discharge . . .	in 2 cases,	or 4	per cent.
„ hæmorrhage, and discharge .	in 2 „	or 4	„
(Incontinence of urine . . .	in 1 „	or 2	„)
(General malaise . . .	in 1 „	or 2	„)

This differs from the proportions deduced from 166 cases in Dr. West's last edition of his work 'On the Diseases of Women,' 1879, p. 375, which give for the cases commencing with hæmorrhage unaccompanied by pain the percentage of 46·3; for the cases commencing with pain only the percentage of 18·0; for those of hæmorrhage with pain the percentage of 13·8; for those of pain with discharge 9·0; for those of discharge without pain 12·6.

But if we add his cases in which pain with or without other symptoms was present as a first symptom we get a total of sixty-eight, or all but 40 per cent., while mine similarly treated give a total of twenty-five, or 50 per cent.

Something must be allowed for the memory in these cases; it is impossible to arrive really at the first symptom noticed; we cannot get further than the first symptom remembered.

Where any symptom was believed by the patient to have definitely preceded all others, even by a short interval, I have noted that symptom only.

With regard to those which were stated to have commenced with pain, I have the following comments to make:

One patient aged fifty had had a flooding five years previously before the menopause, but no other symptoms till five months before admission. In this case I decided to disregard the hæmorrhage.

In two cases pain, hæmorrhage, and discharge were noticed at the same time; this may have been the case in one or two others.

The commonest seat of the first pain is extremely variable, and my notes do not enable me to make any statements with regard to it. I would refer to the table of pain felt in one locality only and the remarks accompanying it.

The cases in which pain was present as a first symptom were as above stated twenty-five, or 50 per cent. Those in which hæmorrhage was present as a first symptom, with or without

other symptoms, amount to eighteen, or 36 per cent. In Dr. West's table they would amount to 100, or 60·2 per. cent. Those in which discharge was present as a first symptom, with or without other symptoms, amount to eleven, or 22 per cent.

In Dr. West's tables they would amount to thirty-six, or 21·0 per cent.

Where the pain was slight and the first hæmorrhage was profuse, it is not improbable that the pain would be forgotten as a first symptom, while a moderate hæmorrhage would most probably attract attention. This may explain discrepancies in various tables, and would tend to strengthen the position of pain as a first symptom on the whole.

TABLE III.—*From the commencement of the disease*—

Pain, with or without other symptoms, was present . . .	in 25 cases,	or 50	per cent.
Hæmorrhage, with or without other symptoms was present . .	in 18 „	or 36	„
Discharge, with or without other symptoms, was present . .	in 11 „	or 22	„

Thus, my cases taken in either way show that pain rather than any other symptom marked the commencement of the disease.

I would add, however, that my cases amount to 50, whereas Dr. West's amount to 166.

Three cases had no pain. In one of them, a patient aged twenty-eight, who dated her illness twelve months back, the disease was an ordinary epitheliomatous cervix, the uterus being movable. In another, aged thirty-two, who dated her illness from a hæmorrhage four months back, the disease was an epithelioma of the posterior lip of the cervix and posterior vaginal wall. In the third, aged forty-six, whose illness began with a discharge six months back, the disease had begun to spread from the cervix to the vagina. All three had suffered from hæmorrhage during the past four months.

To these I have to add two from the Appendix, selected on account of this point. One was a florid, healthy-looking

woman, aged thirty, whose first symptom was a hæmorrhage three months past, and whose disease consisted of an advanced cancer, which had involved the vagina and fixed the uterus. The other was aged sixty. Her illness had begun with hæmorrhage twelve months back, and her disease was an advanced fungating cancer, which had fixed the uterus.

These cases represent every stage of the disease except the most extreme ulceration, all that can be remarked about them in common being the presence of hæmorrhage.

With the above are to be considered 14 other cases in which the pain after admission and rest in bed was found to be not severe enough to give a good test of the efficacy of morphia.

TABLE 4.—*Seat of pain.*

Sacrum generally	9	added together, minus 2 cases in common to more than one heading: 30
„ apex	6	
„ base	17	
Hypogastrium		26 (1*)
Poupart's ligament		23
Pudenda		18
Front of thigh		11
Painful sitting		6 (1*)
Back of thigh		6 (1*)
Inner side of thigh		6
Coccyx		5
Painful standing		5
Painful micturition		5
Loins above sacrum		4
Internal abdominal ring		4
Sacro-iliac joints		4
Pain transfixing the body		4 (1*)
Iliac crest		4
Rectum		4
Outer side of thigh		4
Below knee		4
Anterior superior spine of ilium		3
Outer side of ilium		3
Buttocks		2
External abdominal ring		2 (1*)
Painful defæcation		2
Painful lying		1
Posterior superior spine of ilium		1 (1*)

Over hip-joint	1
Over trochanter	1
In knee	1
Total . . .	190 (6*)

N.B.—Cases in Appendix are marked with an asterisk.

The seat of pain was ascertained by making the patient place her hand or finger on it. In a few early cases the part of the sacrum was not specially noted. In two cases pain was felt in two distinct parts of the sacrum, and not generally throughout its extent. The apex is not uncommonly the seat of pain. If we were to speak generally of "backache," we should have to include with the sacrum the loins above the sacrum, sacro-iliac joints, buttocks (?), and posterior superior spines of ilium, which would give a total of forty-six out of a total of 190 pains of all sorts, or 24 per cent.

The *hypogastrium* was indicated in most cases by the patient laying her hand above the pubes in a vertical direction, the fingers pointing towards the pubes.

Poupart's ligament.—The pain above Poupart's ligament, and parallel to it, was indicated by laying the hand of the corresponding side exactly parallel to and above it. If we were to speak generally about the "groin" or "iliac fossa," we should have to include pains over the internal and external abdominal rings, and anterior superior spine of ilium (?), making a total of thirty-five, or 18 per cent., of all pains.

If we add the cases in which pain was rather worse in the left inguinal or iliac regions, or exclusively on that side, as compared with the right, we find the numbers—left=12, right=2, or 6 to 1.

This preponderance of left-sided pain in cancer seems to argue for the essential difference between the two sides in their capacity for feeling pain, for cancer has no predilection for the left side.

This preponderance of left-sided pain is well-known with regard to submammary pains, as well as pains in the iliac fossa; indeed, "pain in the left side" is almost a proverbially frequent female complaint.

But it is not only in the capacity for feeling pain that the left side is distinguished from the right, for it is also more often affected with anæsthesia. Briquet[1] found in 90 cases of hemianæsthesia, 20 affecting the right, and 70 affecting the left, side.

That man is not an absolutely bilaterally symmetrical animal is shown, besides, by the localisation of the cerebral centre for speech.

Front of thigh.—The whole of the quadriceps extensor cruris was distinctly indicated by the patients. If we add other parts of the thigh we shall get 27 in all, or 14 per cent. of all pains. Pain in the thighs does not seem to be commoner on one side. It seems to be remarkably frequent in pelvic cancer.

Painful standing.—The pain in these cases is strictly analogous to those in "painful sitting," the diseased viscera being dragged in the former case by their own weight, and pushed up in the latter by the soft structures passing through the pelvic outlet. One case in the series complained that the recumbent position caused pain; this, though unusual, belongs to the same class. The patient felt this pain if she lay on either side, when she "felt as if the womb was being dragged from the side."

Painful micturition.—Of the 5 cases the following are some of the particulars:—The first had an ordinary epitheliomatous cervix, the uterus being movable. She complained of pain in the vulva on micturition, relieved by micturition. The second had an ulcerated cancerous uterus in an advanced stage; the bladder was tender but large. For five out of the six months of her illness she had suffered from frequent and painful micturition, having to pass water at first every hour, more frequently as time went on; the pain on micturition was pricking and burning, like a scald. The frequency of micturition compelled her to rise, when in the hospital, every ten or fifteen minutes. The hypodermic injection reduced this to two or three times a night, greatly relieving the pain. The third case had a generally indurated

[1] Briquet, 'Traité Clin. et Therap. de l'Hystérie.' Paris, 1859, p. 278.

pelvis; the bladder was hard, but scarcely tender, and four inches long. The necessity for micturition came on her with great frequency, suddenness, and pain, which latter was relieved by micturition, but when it came on she could not hold her water. The fourth case suffered from frequent and painful micturition, the pain being felt in the base of the sacrum, and also in the vagina, "a forcing as if something wanted to come away." In her case there was epithelioma of the cervix, with partial fixation of the uterus, the vagina having become involved. In the fifth case micturition was frequent and painful; the disease was general induration of the whole pelvis, with an abdominal tumour and ascites.

The physical signs sufficiently explain the symptoms in three of the cases; in the fourth the disease had begun to extend, but in the first case it was in quite an early stage. We need only allude to the extreme frequency of this symptom in pelvic diseases of various sorts.

Pain in loins above sacrum.—In one case the disease was simply epithelioma of the cervix, uterus movable; the pain was across the loins. In another the disease was advanced, pelvis entirely invaded, with a recto-vaginal fistula; the pain extended from the last lumbar spine down the sacrum. The third was a simple epithelioma like the first; the pain extended from the upper lumbar spine to the coccyx. In the fourth the disease was similar; the pain was over the last lumbar spine.

Pain transfixing the body.—In the first case the disease was advanced, the pelvis generally invaded, with recto-vesical fistula; the pain extended from above the pubes to the right, and lately to the left, posterior superior spine. In the second the cervix was displaced to the left, nearly fixed, hard, and nodulated; the pain began in the coccyx and pierced through to the inner half of both Poupart's ligaments, above the pubes, and down the inner side of both thighs. In the third the pelvis was generally invaded with hardness, the deposit being most on the left, the uterus seeming to be joined to the left sacro-iliac synchondrosis;

the pain was situated in the base of the sacrum and in the left sacro-iliac synchondrosis, from which it pierced through to the left groin. In the fourth the disease was a malignant hypertrophy, the uterus being five inches long, not fixed; the pain pierced from the sacrum to the hypogastrium. In the third case only could any connection be traced between locality of disease and locality of pain. All the cases are seen to be more or less advanced. I am inclined to regard this pain as rare, except in malignant disease.

Iliac crest.—Pain was distinctly referred to the outer side of the iliac crest.

Rectum.—The first was an advanced case with recto-vesical fistula. In the second, which was advanced, the neighbourhood of the rectum was markedly invaded. In the third there was recto-vesical fistula. In the fourth the disease was advanced, the rectum narrowed, producing retention of fæces. Pain was felt nowhere but in the rectum.

Pain below knee.—In one case pain was felt in the left knee and instep; in another in the right or left ankle; in another occasionally down the back of the left calf to the sole of the foot; in the fourth at the back and bottom of the left heel, with redness. The pelvic physical signs throw no light on any of these.

Outer side of ilium, that is, on the fossa of the gluteal muscles or dorsum ilii.

Painful defæcation.—This is here distinguished from pain in the rectum apart from defæcation. Both were advanced cases, one with retention of fæces.

TABLE 5.

Seat of pain.	Number.	Per cent. (of all pains).
"Backache"	46	24
Lower abdomen	26	14 (nearly).
Groins	35	18 (6 times as often in left as in right).

The following table represents the cases in which pain was felt in one locality only:

TABLE 6.

No.	Age.	Pain.	Duration of pain.	Disease.
14	24	Stabbing over left Poup. lig.	5 months	Cancer with parametritis (?), dense extending hardness above left Poup. lig. and imbedding uterus.
22	44	Indefinite aching of sacrum	3 months	Encephaloid mass protruding into vagina, removed twice.
23	46	Burning above pubes	7 months	Epithelioma of cervix, principally of canal.
24	27	Stabbing in hypogastrium, pain in anus on sitting	2 or 3 weeks	Cancer with perimetritis, uterus fixed.
33	33	Gnawing over last lumbar spine	5 months	Epithelioma of cervix, uterus movable.
42	33	Pain in rectum on defæcation	3 years	Advanced cancer of pelvis, rectum obstructed.
46	60	Burning in pudenda	7 weeks	Advanced ulcerated cancer, malignant vesico-vaginal fistula.

The limitation of the pain in all except one of these cases coincides with its short duration. In No. 42, had not the disease happened to invade the rectum there would have been no pain in a very advanced case. Case 46 is still more remarkable. Cases 14 and 24 are also advanced, though the pain had only lately been felt.

The whole table shows how far cancer may advance without pain, and should be compared with the cases above described, in which pain was absent. It shows so far that no one spot is more frequently than another the seat of the first pain; pain may begin anywhere. Most of the cases had pain in so many different parts that any further generalisation seems impossible.

External soreness to touch was noticed in 26; in one case it was eased by warm drinks, increased by cold drinks; in another it was eased by external warmth. In one case there was soreness to touch, but relief by pressure. In 9 cases there was no spot sore to touch.

I have thought it useless to speculate on the question of nerves involved, for in the first place this would simply

amount to an enumeration of all the nerves in these regions; and in the second place the known course of malignant disease, advancing as it does regardless of anatomical impediments, would vitiate any conclusions based upon the relations of fasciæ or the course of nerves.

TABLE 7.—*Cases showing coincidence of locality of disease and locality of pain.*

No.	Disease.	Pain.
8	Hardness behind cervix on left, extending in front to vagina, which lies pressed to left obturator foramen.	Just within left ant. sup. spine, and along left Poup. lig.
10	Between uterus and left side of pelvis is a mass of induration amalgamating uterus and bone.	Pain down back of left thigh to ham, no such pain on right.
26	Deposit most on left side of uterus, where it seems to be joined to left sacro-iliac synchondrosis.	Pain in left sacro-iliac synchondrosis, and from thence to left groin, sometimes down outer side of left thigh, no similar pain on right side.
29	Uterus adherent to left side of pelvis, right side comparatively healthy.	Twitching and pain down back of left thigh, no similar affection of right.

The results of this table are mostly negative and may be stated thus: that only in 4 of the 50 cases could any such coincidence be traced. It must be remembered that any considerable invasion of the pelvis renders a minute examition of its physical condition impossible.

TABLE 8.

Duration of pain.	Number.
2 weeks	1
4 „	1
6 „	1
7 „	1
8 „	2
9 „	1
11 „	1

Duration of pain.	Number.
3 months	3
4 „	4
5 „	6
6 „	6
7 „	1
8 „	1
9 „	3
12 „	4
16 „	1
19 „	1
2 years	6
3 „	2

I have not been able to make any general statements with regard to the date of the commencement of pain, which is subject to enormous variation.

TABLE 9.—*To illustrate the quality of the pains in the words of the patients.*

	Number.	
Aching	24	
Dragging	19 (1*)	†In one case "bearing down, as if something was dragging, relieved by wearing a cloth;" in another "as if the womb were falling out."
Forcing		
Bearing down†		
Like a weight		
Shooting	17 (1*)	
Stabbing		
Darting		
Gnawing	9	
Hot, burning	8 (1*)	
Throbbing	3	
Like first stage of labour	3	Described as pains in sacrum like those at the beginning of labour.
Like second stage of labour	3	Described as pains like labour when the child is being born into the world.
Smarting	3	
Pricking	3	
Sharp	3 (1*)	
Sore, leaving soreness	2	
Jumping	2	
Relieved by pressure	2	
Like a gathering	2	
Like scraping the bone	2	
Grasping	1	

As if the bones were parting	1	
Bursting	1	
Numb	1	
Windy	1	... Relieved by passing flatus.
Like a stitch	1	
Opening and shutting	1	
Like cramp	1	

Leading questions were avoided, the words are those selected by the patients themselves.

TABLE 10.—*To show intensity of pain.*

Slight	15
Severe	8
Causing screams or groans[1]	16
Preventing sleep:	
Never	4
Occasionally	9
Usually	26 (1*)

TABLE 11.—*To show the relation between intensity of pain and duration of disease.*

Intensity of pain.	Average duration of disease.
None[2]	8 months.
Slight	Nearly 14 months.
Severe	9½ months.
Causing screams or groans	Nearly 15 months.

This table shows that no relation existed between intensity of pain and duration of disease.

TABLE 12.—*To show the relation between intensity of pain and duration of pain.*

Intensity of pain.	Average duration of pain.
Slight	Nearly 9 months.
Severe	8 months.
Causing screams or groans	9½ months.

This table shows that no relation existed between intensity of pain and duration of pain.

[1] The fact of patients groaning or screaming, apart from the individual peculiarity of endurance, is quite as much a question of quality as of intensity of pain; a constant pain is less likely to produce cries than one which is paroxysmal.

[2] Two cases in the Appendix are included.

TABLE 13.—*Showing time when pain is worst.*

Night	20 (1*)
Painful standing	9
Evening	4
No difference, constant	3
Noon and midnight	3
Indefinite	3
Painful sitting	3
10 p.m.	2
When bladder is full	2
3 p.m.	1
4 p.m.	1
From 4 to 7 p.m.	1
8 p.m.	1
After drinking	1
Painful defæcation	1

If all the cases in which pain was worse in the latter half of the twenty-four hours (*i.e.* post meridiem) be added, they amount to thirty (not including one case in which pain was greatest at noon and midnight).

In no case was the pain worst in the former half of the twenty-fours (*i.e.* ante meridiem).

TABLE 14.—*Bleeding and its relation to pain.*

3 patients had no pain [1]	—
Hæmorrhage [2]	41 (3*)
No hæmorrhage	9
	50 (3*)
Pain relieved by bleeding	24 (1*)
Pain worse after bleeding	3
Ditto, "still patient feels relieved by it"	1
Pain absent during bleeding, worse after it	1
Pain worse just before and just after it	1
No difference noticed [3]	7
No data	1

[1] All the patients who had no pain had hæmorrhage.

[2] The 41 cases of hæmorrhage consist of all those in the second half of the table and the 3 painless cases.

[3] In 2 cases the pain was slight; in 2 the bleeding was nearly or quite constant.

Of the patients whose pain was slight, fourteen had hæmorrhage, one had none.

Of the patients whose pain was severe, six had hæmorrhage, two had none.

These figures do not militate against the above table, but they show very little in addition.

I cannot help connecting the two facts of pain worse at night and pain relieved by bleeding, with the thought that they may both be due to a common cause. Pain relieved by bleeding suggests tension of the vessels in the diseased parts as its cause. With regard to pain being usually worst at night I would refer to the common complaint of bandages on the lower limbs, comfortable by day, becoming tight at night, as an indication of a rhythmical change of the vascular state by day and by night.

Symptoms of nerve affection.

It has been difficult to select instances; most of the pains felt externally are no doubt due to some such cause as transference or radiation. I would refer to those cases in which pain was felt below the knee which are mentioned in the table, showing the seat of the pains, and especially to one case in which it occasionally ran down the back of the left calf to the sole of the foot, which was not tender to touch. This was a case of epithelioma of the cervix, uterus fixed.

But two cases have come under my notice in which there were most singular motor phenomena, consisting of twitchings of one or both legs. One case occurred in the series (No. 29), the other I have placed in the Appendix for its special interest (No. 53*). In the former case the movements were seen, in the latter case they were not seen as the patient was an out-patient and they occurred at night only, but they were so graphically described, and resembled so nearly those of the case which was in bed in the hospital that I have no doubt of the truth of the account.

These cases are as follows:

No. 29.—A. P—, æt. 30, four children, last ten years; one miscarriage, twelve months ago. Under observation seventeen days.

Physical condition.—Indurated nodular cervix; *uterus adherent to left side of pelvis,* right side comparatively healthy. *Duration.*—Never well since miscarriage twelve months ago; had a flooding five months ago, worse since then.

Seat of pain—First in middle of hypogastrium, then *went down into the back of the left thigh* from the buttock to the knee; occasionally in vagina; cannot sit on right buttock ("painful sitting"). Duration: two months. Quality: in hypogastrium "aching" and "weight"; down thigh "aching" or "numbness." Motor phenomena in back of left thigh, the muscles of which occasionally twitch, the twitching being accompanied by pain, extending from the hip to the knee, and referred to the region of the left sciatic nerve; noticed for the last two months. The leg sometimes gives under her in walking, so that once she actually fell, but the pain is felt when lying still. Pain in vagina, "aching," also like a periodical "gathering;" "when it breaks she is easier," "it seems to break once in two or three days, or two or three times a day." The twitching attacks do not recur periodically and their duration is variable. Intensity: not severe, does not destroy sleep. Time: no fixed time.

Symptoms of nerve affection.—Twitching (see above).

External soreness.—None. Frequent micturition not complained of. Bleeding: has had three severe floodings; relief with bleeding, pain worse before, better after. Offensive discharge at times. Sweating: none. Pyrexia: not noticed. Morphia treatment: none required.

No. 53*.—E. G—, æt. 29, married 2½ years; never pregnant, seen by Dr. Godson twice in out-patient room of St. Bartholomew's Hospital.

Physical condition.—Cachexia, loss of flesh seven weeks. Large fungating mass involving cervix and upper part of vagina; uterus fixed, bleeding on touch; the mass preventing any further investigation. Duration: first thing

noticed was fainting at a monthly period five months ago, then pain began and returned at every period. For the last two months the pain has been continuous.

Seat of pain.—Above pubes, opposite each external abdominal ring; from the right ring through to right posterior superior spine; also along course of right sciatic nerve as far as ham; nowhere else. Duration: dysmenorrhœa five months, continual pain two months. Quality: in groins "dragging"; from right inguinal ring to sacrum "darting"; down back of right thigh "sharp" and "burning." Intensity: pain down leg, makes her scream, cannot sleep half-an-hour together. Time: worst at night.

Symptoms of nerve affection.—At night a sensation travels all along the course of the right sciatic nerve, from the hip to the toes; the thigh becomes flexed on the abdomen, the knee on the thigh, and the toes are flexed "*en griffe.*" At the same time a gnawing pain begins at the upper part of the back of the thigh and extends as far as the ham along the back of the thigh, no further. The paroxysm of pain and spasm lasts about three minutes; it occurs once or twice every night, never by day. She can walk and use her leg quite well, but sitting hurts her. During the nocturnal attacks the right leg becomes hot to the hand, and her husband complains that it burns him; no redness nor swelling. She can feel in her legs and feet as well as ever.

External soreness over right external ring, over right posterior superior spine, in upper part of vulva (where there is no pain except on pressure). Frequent micturition: no complaint. Bleeding: six weeks. Relief with bleeding: pain is worse than usual before the bleeding; during the bleeding the pain in sacrum is very bad; she feels relieved when the bleeding is over. Offensive discharge: none, no discharge at all. Sweating: none.

Three days after her first visit she returned to say that her left leg had been attacked exactly like the right, the attack had lasted an hour, the leg burnt like the other, and was drawn up just in the same way. She added to her former account one of "painful sitting," when she sits "it

seems to force something up both passages," also of "painful lying," if she lies on her back "the pain goes through to the stomach, if she lies on her stomach, the pain goes through to her back."

No. 54.*—M. S—, æt. 38, married nineteen years; eleven children, the last ten months ago; no miscarriages. Catamenia began at fifteen, and have been regular. Till her last confinement, on December 30th, 1878, she was quite well; the labour was easy and natural. After her confinement a continuous coloured discharge.

In August, 1879, a growth was removed in the hospital. On the third day after the operation she was seized with pain, which has become gradually worse for the last four weeks, and has made her unable to lie, except on her left side; decubitus previously indifferent.

On her admission, on November 13th, 1879, she lies on her left side, with the right thigh flexed at an angle of sixty or seventy degrees on the trunk, in which position she suffers least pain. She thinks she could move the thigh if it were not for the pain. There is an area of blunted sensibility to gentle pressure on the front of the right thigh, extending somewhat to the external side. This area does not correspond exactly to the distribution of any single nerve. It is mainly situated over the region supplied by the external cutaneous nerve, but it also encroaches on those supplied by the middle and internal cutaneous nerves. Its boundaries are not constant. Around this area is an occasional zone of exalted sensibility, but this is also not constant. The most sensitive points are over the articular ends of the tibia and femur at the knee-joint. Another area of exalted sensibility follows somewhat the course of the long saphenous nerve, but very inaccurately. The whole of the thigh is exceedingly sensitive to deep pressure, and often the seat of paroxysms of pain. The amount of pain seems to vary much from time to time, and to be greatest when the patient's attention was directed to the limb.

Physical examination (imperfect on account of patient's

inability to lie on the right side) shows a large, not tender, mass in the right iliac fossa, extending towards the left, gradually diminishing in extent as far as the left pubic bone. Cervix uteri posteriorly and to the right, fixed, and consisting of several projecting, evidently malignant, masses.

This case has not been included among those marked with an asterisk in the table, having been inserted after the paper was written.

I have no special explanation to offer with regard to the retraction of the limb or the perversion of sensation.

In the former case (29) the disease was almost confined to the left side of the pelvis, the pain and twitching attacking the left leg. The attacks were not periodical, and their duration was variable.

The second case was more remarkable. In addition to pain there was violent motion, and probably vaso-motor disturbance, all being paroxysmal. While under observation the second leg became affected like the first. Advanced disease prevented any minute pelvic examination.

The pain in both cases passed down along the back of the thigh, but no farther than the ham, the muscles of the whole leg being affected in the second case.

It is hard to give an anatomical explanation of these cases. Pain ceasing at the ham would make us think of the small sciatic nerve, but the motor phenomena are not thus accounted for. Nor will any one nerve account for the elaborate flexion of all the joints described in the second case, on which subject the patient was repeatedly cross-examined.

The movements were consentaneous, pointing to the action of a nerve centre. Was the spinal cord affected by the disease? This could hardly have been, not only because there was no affection of sensation (such a selection of the motor tracts by cancer being quite inconceivable), but also because the affection was intermittent with large intervals.

Were the phenomena due to peripheral irritation reflected from the cord in the form of motor and vaso-motor disturb-

ance? This seems most probable, especially when we remember that the response was at first unilateral, and became afterwards bilaterally symmetrical, illustrating Pflüger's laws of reflex response.

I should feel inclined to connect the nocturnal spasm with the remarks above made with regard to the vascular state and nocturnal pain, and to suggest that, although intermittent phenomena cannot be accounted for by actual cancerous invasion of these motor nerves, they might be due to hyperæmia extending beyond the disease in their neighbourhood.

The only case resembling these in any respect is one related by Cornil ('Gaz. Med. de Paris,' 1863, p. 461). "Cancroïde de la portion vaginal du col utérin et du vagin, altération consécutive de même nature des nerfs sciatique et crural du côté gauche." This was a case of Charcot's. There was œdema of the left lower limb, great pain therein, which began in the great toe, then came in the calf and thigh, and then in the gluteal region. The pain preceded the œdema five weeks. The pain was at first paroxysmal and intense, making her call out, and was compared by the patient to pinching, it followed the course of the external saphenous nerve. The thigh became flexed on the pelvis, the leg on the thigh at an obtuse angle, the foot strongly extended, toes flexed on the foot, sensibility of skin and power of motion not lost, but the latter impaired. Post-mortem examination showed thrombosis of the whole crural vein, which was invaded with cancer. Anterior crural nerve cancerous, and around it in its whole course dissecting suppuration; sacral, lumbo-sacral, and sciatic nerves cancerous; femoral artery sound. Ulcerated cancer of cervix uteri and vagina, the former destroyed.

The flexion in this case was apparently permanent, and differed from that in ours.

Weir Mitchell ('Injuries of Nerves,' p. 123) mentions chorea in limbs after injury to the nerves as dependent on changes in the nerves, but gives no case which resembles mine.

Cornil, in an excellent paper, "Sur la production de tumeurs épithéliales dans les nerfs" ('Journ. de l'Anat. et de Phys.,' Robin, 1864, vol. i, p. 185), says:

"La littérature médicale est pauvre sur ce sujet, et cependant les douleurs si intenses ressenties par les malades au siége de tumeurs de nature épithéliale et dans leur voisinage, parfois sur le trajet des nerfs, comme une douleur névralgique, appartiennent presque toujours, ainsi que le demontrent les autopsies, à une lésion matérielle des nerfs." And p. 196, "La douleur, s'irradiant plus ou moins régulièrement dans la diréction du bout péripherique du nerf, très-vive, mais ne possédant pas de foyers qui en soient spécialement le siége, est le seul caractère de ces altérations des nerfs. . . . . Pour les tumeurs internes designées sous le nom commun de cancer, toutes les fois q'une femme avait pendant la nuit souffert d'une façon continue et violente dans les cuisses, les jambes et la région fessière, nous avons presque toujours trouvé après la mort, soit une néoplasie épithéliale, soit une hypertrophie et hypergenèse du tissu cellulaire de névrolème des nerfs sciatique ou crureaux, généralement d'un seul côté."

I had no opportunity of verifying these remarks by an autopsy; the early or late onset of the pain in some cases, and its absence in others, probably depends on the early or late invasion of the nerves. The multiplicity of the pains shows that any or all of the pelvic nerves may be involved, the aching of the thighs probably indicating the invasion of the anterior crural nerve.

Frequent micturition was complained of in seven cases. This includes all those mentioned in Table 4, as suffering from painful micturition, and two others; one of which has been mentioned before as having a large pelvic and abdominal tumour with ascites, the whole of the pelvic brim being a solid mass; the other was a very advanced case, with obstruction of the rectum, retention of fæces, and recto-vesical fistula.

Frequent defæcation (not painful) was complained of in one case of advanced ulcerating cancer with recto-vesical fistula.

Frequent micturition and defæcation were complained of in one case of advanced cancer with recto-vesical fistula.

Difficult defæcation with retention of fæces was noticed in two cases, one mentioned above. In both cases distinct obstruction could be felt.

Fistula of some sort was observed in six cases; recto-vesical in three, vesico-vaginal in two, recto-vaginal in one.

Incontinence of urine was observed in one case of ordinary epithelioma of the cervix, uterus movable.

We come now to the second half of the subject, namely, the efficacy of morphia as administered in various methods.

The quantities employed were, subcutaneously, gr. $\frac{1}{6}$, per rectum gr. $\frac{1}{2}$, per os gr. $\frac{1}{12}$ (hydrochlorate). The ordinary doses in use at the hospital.

Of two cases I am unable to give the results.

In seventeen cases there was either no pain, or the pain so improved beforehand with rest in bed, that it gave no fair test of the efficacy of morphia.

The remaining cases had morphia, and the results were noted.

In ten cases the order of efficacy was as follows:—(1) Injection, (2) draught, (3) suppository.

In four additional cases the injection relieved most.

In three cases the order of efficacy was:—(1) Draught, (2) injection, (3) suppository; but in one of these cases it was doubtful whether the injection did not relieve as much as the draught, though it caused vomiting.

In two cases the suppository was said to have produced most relief, but both these results were doubtful; in one case the injection, which relieved as much otherwise, produced vomiting.

In one case the draught and suppository are said to have produced equal relief, and more than the injection.

In four cases the suppository was useless.

In one case the draught was useless.

In five cases the result was uncertain.

In five cases all methods are said to have given equal relief, but one of these is doubtful.

In one case the patient denied that any method gave her relief, but she was dissatisfied with an absence of alcohol from her diet list, which drug she preferred to morphia.

If we add up these cases, we shall find the cases in which the injection gave most relief to amount to fourteen; those in which the draught relieved more than the injection to amount to four (one doubtful); those in which the suppository gave more relief than the injection to amount to three (two doubtful).

Relief was gained without sleep in six cases; in two after the injection (one of them with vomiting, which may account for the sleeplessness); in two after the suppository (one with slight relief only to pain); in two with each of the three methods, one of them with giddiness. In the remaining case the relief was unsatisfactory.

Relief to difficult, frequent, or painful micturition.—In two cases of frequent micturition, and one of frequent micturition and defæcation, the effect was marked. In one of these cases the patient had to rise every ten or fifteen minutes, but with the hypodermic injection the frequency was reduced to two or three times in the night. In another all the methods relieved the pain, diminished the frequency of micturition, entirely banished the pain of micturition, and relieved the pain of defæcation. This was an advanced case with obstruction of the rectum, retention of fæces, and recto-vesical fistula. Of course, the disease itself was made worse by increasing retention of fæces.

This superiority of the injection consisted in its quicker, more thorough, and more enduring effect; in most cases the patients had no hesitation in preferring it, and that in spite of the puncture.

At one period of the inquiry it was proposed to press each method to its physiological effects, but in consequence of the complications thus introduced, this was afterwards abandoned, the above doses being mutually compared.

Untoward results of morphia.—*Nausea* was produced in six cases; in four with the use of the hypodermic injection only, in two after the use of all the three methods; in one case nausea was accompanied by dizziness, in another by faintness.

Vomiting was produced in seven cases; in three with the use of the hypodermic injection only; in one after the injection and suppository; in one after the injection and draught; in one by all the methods. This last case was relieved by the addition of Atropiæ Sulph. gr. $\frac{1}{120}$ to Morph. Acet. Hypoderm. gr. $\frac{1}{6}$, which stopped the vomiting and increased the sedative action of the morphia. I regret that it was not tried oftener. In one case vomiting was accompanied by giddiness, in another by headache.

Giddiness was produced in two cases. The injection is seen to be rather more apt than the other methods to produce these discomforts.

It has not entered into my programme to compare morphia with any other drug for the relief of the pain of cancer. I have so far taken it for granted that,—the question whether in any particular case one is justified in running the risk of demoralising a fellow creature for the sake of relieving her pain being duly weighed and settled,—morphia is the only drug on which we can rely with confidence for that relief.

There can be no doubt that the hypodermic injection did this most effectually, but as it cannot be safely entrusted to the patient, the other methods can be tried and the injection kept in reserve.

In spite of the fact that the morphia suppository is applied to the very neighbourhood of the disease, it was decidedly less effective than morphia given by the mouth, and very much less so than morphia injected subcutaneously.

Dr. MATTHEWS DUNCAN regarded this paper as demanding perusal at home and study rather than criticism, for it was the most valuable and elaborate inquiry that had yet been made into the subject of pain and its relief in an otherwise hopeless and very frequent malady. It contained not merely scientific details but practical contributions to treatment by morphia, the chief remedy

for pain. The great work of the great Laennec was the establishment of relations between signs and pathological conditions. A far more difficult undertaking was that in which Dr. Champneys had now taken part, of establishing relations between symptoms and pathological conditions. Pain was the greatest of symptoms, and it well illustrated the initial difficulty in this matter, for we had as yet no odynometer to enable us to make a secure commencement of the inquiry by having some definiteness as to the kind and degree of pain to be studied.

Dr. GRAILY HEWITT considered Dr. Champneys' contribution to the clinical history of cancer very valuable. Unfortunately the subject was a thankless one, the success which had attended our attempts to deal with cancer being at present limited to the diagnosis and prognosis of the disease. The great dread of the disease renders the diagnosis very important. Hence the value of a careful investigation of the symptomatology. As to the pain in cases of cancer of the uterus, or parts adjacent, there was one feature of great diagnostic value, viz. the spontaneity of the pain. In cases of pain around the pelvis, due to various other uterine disorders, the pain had not this character, but was more generally induced by movement, or by certain positions of the body in making those movements, whereas in cases of cancer the pain occurred irrespective of such movements. There were few exceptions to this rule. Another point of diagnostic value in regard to cancer was the condition of the pulse. He (Dr. Graily Hewitt) rarely found the pulse under 90 in cases of uterine cancer, even when the patient was lying quietly in bed. As regards the relief of pain in cases of uterine cancer, he believed one of the most efficacious means was the injection of a few drops of laudanum mixed with water per rectum.

The PRESIDENT was surprised to hear pain spoken of as the most frequent first symptom. He had seen so many cases in which the disease was far advanced before it occurred. He inquired whether local treatment had been attempted to lessen pain, and if iodoform had been used for this purpose, with what results?

Dr. GODSON, while recognising the amount of time and labour, and the care spent in compiling the tables, considered fifty cases far too few to draw any very definite conclusions from. Out of the author's 50 cases no less than 20 were below thirty or above fifty years of age; this made the percentage of cases between thirty and fifty years of age far too low. He (Dr. Godson) had made an analysis of 150 cases of uterine cancer which he had attended, and 44 were between thirty and forty, and 66 between forty and fifty years of age, which accorded with Dr. West's statistics. With respect to the locality of the pain at the commencement, it was generally very difficult to get reliable information, more especially when the disease was far advanced. That which existed at the

present time was so apt to influence the mind of the sufferer; the same applied to the first symptom, but Dr. Godson was of opinion that this was more generally hæmorrhage; at all events, pain was often a very late symptom, only occurring when the disease spread to the structures surrounding the womb. In one of Dr. Champneys' cases the disease commenced with bleeding after parturition. This was not by any means an uncommon case. In Dr. Godson's first series of 50 no less than 4 dated the commencement of their illness to their confinements, never having been free from hæmorrhage since; and yet previous to delivery not a sign existed, if pain, hæmorrhage, and watery discharge be accepted as characteristic symptoms. The uterus while undergoing involution appeared to be a very fertile soil for the germination and rapid growth of cancer. Dr. Champneys had shown that the hypodermic injection of morphia was the most effectual method of relieving the pain; this was not peculiar to cancer, it applied to pain of every description, from all causes; but the method of application was so inconvenient that it could not be generally adopted, and was very unlikely to supersede the administration of morphia by the mouth.

Dr. CHAMPNEYS replied to the questions of the President that very few of his cases had been suitable for surgical treatment, nearly all being already too advanced, but that amputation of the cervix in one or two cases had relieved pain for the time, although the subsequent return of the growth showed that a diseased base had been left. He had no experience of iodoform.

To Dr. Graily Hewitt he replied that observations on the pulse, though made, had not entered into the scope of his present paper, still he might say that he had observed transient accelerations of the pulse by no means coinciding with elevations of temperature, nor with aggravations of pain. He had not used laudanum per rectum.

To Dr. Godson, he did not (as already stated in the paper) think his observations on the subject of the first symptom noticed could upset the results of a larger number noticed by a far more competent observer—Dr. West; still, he was not at all sure that pain would not eventually be found to be a less infrequent first symptom than had been hitherto imagined. It must be remembered that we had only the patient's memory to rely upon, and that was a source of information of very uncertain value. Three things might happen to a fact—the patient might never observe it, might forget it, or might remember it. The question was this, Was a patient most likely to remark and remember pain or bleeding. He could not help thinking that while pain was often forgotten as a thing that most women considered to be, up to a certain point, all in the usual course of life, bleeding was observed and remembered. Again, an observer would be more likely to get a history of bleeding from a first examination, and one of pain from a cross-examina-

tion, when the patient's memory might be refreshed. This would apply to the cases of patients seen as out-patients as compared with those under extended observation in the wards.

With regard to the relation of cancer and pregnancy he had not incorporated his observations in this present paper.

NOTES ON A JAMAICA GALACTAGOGUE,

By Izett W. Anderson, M.D. Edin.
KINGSTON, JAMAICA.

I am desirious of bringing under the notice of the Obstetrical Society of London a galactagogue, which I believe is entirely unknown in England.

My attention was first attracted to it under the following circumstances. In April, 1863, I performed the Cæsarian section on a young black primipara for deformed pelvis, the result of rickets, and was fortunate enough to save both mother and child. My patient had a severe attack of peritonitis followed by the formation of an acute abscess in the upper and left part of the abdomen, and this discharged a pint of putrid pus through the unhealed portion of the abdominal wound on the thirtieth day after operation. Convalescence after this was rapid, and the patient being quite well I ceased attendance on the forty-sixth day after operation. The child from birth was fed by hand, as up to the time the mother left my care the breasts were perfectly flaccid and entirely destitute of milk.

I naturally supposed that the child would be brought up by hand, and on meeting the mother some time after asked on what she was feeding it; she said that she nursed it, and on asking how she was able to do this she said that she had brought down the milk by drinking "cotton leaf tea," She exposed her breasts which I found large and hard, and on squeezing the nipples milk abundantly jetted forth.

These facts appeared to me so remarkable that I made inquiries on the effects produced on puerperal women by

cotton leaf tea, and I at once learned that it was well known and recommended by medical men and old midwives in this island as a galactagogue of very efficient action.

For the last sixteen years I have advised the use of cotton-leaf tea in all puerperal patients who were deficient in milk, and the results obtained in a large midwifery practice has convinced me that its galactagogue powers are in the vast majority of cases entirely beyond doubt and question.

The word "tea" is by the natives of this island applied to any infusion made from leaves of plants either fresh or dry. "Cotton leaf tea" is made from the green leaves of one of the shrubs that produces the cotton of commerce. I think the botanical name of the plant employed is the *Gossypium Barbadense,* but of this I am not absolutely certain, as twenty years of incessant work in the tropics has made me forget my botany. Whether this is the correct name or not is of little importance, as if the necessity arises it can easily be ascertained. The shrub varies in size, but is usually six or eight feet high, and the leaf is large and palmated.

The "tea" is prepared by infusing six or eight leaves in a breakfast cup of boiling water carefully covered. According to the effects produced, four or more cups may be drunk in the twenty-four hours. Some patients drink it almost *ad libitum,* consuming two or three pints of it daily. The taste of it is by no means unpleasant, and many drink it with milk and sugar as they would black tea.

Long experience has convinced me that the popular value attached to this tea is by no means exaggerated. Where the milk is long in coming down, or where if present, it is scanty, or where if at one time abundant, it is beginning to fail, I always prescribe the cotton leaf tea, and I have but rarely been disappointed. I will hardly venture to say that it has never failed, but the cases have been very rare indeed in which it did not produce some good effect.

It seems to act best in the early months of nursing, and my present impression is that it is not to be relied upon beyond four or five months after confinement, but this may

possibly be due to the fact that early artificial feeding of infants is common in this island, and their application to the breasts less frequent, and hence the breasts secrete less from less demand being made upon them.

In connection with the galactagogue effects of the leaf of the cotton plant, it is a matter of interest to read what is stated in a Treatise on Therapeutics by Dr. Wood, of the United States, under the heading "Gosypii Radicis Cortex, U.S." Dr. Wood writes, "The root of the ordinary cotton plant is asserted to be used by the negroes in various portions of the South as an abortifacient, and Dr. Bouchele, as long ago as 1841, claimed for it medical properties similar to those of ergot. It has not, however, come into general use, and our knowledge of its properties is at present very scanty and uncertain. The oxytocic dose of a decoction (4 oz. in a quart of water boiled to a pint) is stated to be a wineglassful to be repeated every thirty minutes as necessary. The remedy has also been employed in amenorrhœa and in dysmenorrhœa, in which diseases from three to five grains of a solid aqueous extract have been given three times a day."

Of the oxytocic effects of the cotton plant I have had no experience, but I can easily understand that a medicine which stimulates the uterus will always act on the breasts from the intimate physiological connection which exists between them. I trust I may not be considered presumptuous in suggesting that possibly ergot is worthy of trial as a galactagogue, and that it might stimulate the secretion of milk if given frequently in small doses and well diluted in warm water.

The cotton plant does not grow in England, and it may be some time before any members of this Society may be able to try upon their patients an infusion of the fresh leaves as we use them in this island. In the meantime I would offer a suggestion. I believe I am correct in stating that Messrs. Corbyn and Stacey, of London, import a Liquor, Gossypii Corticis, which I believe is in the United States Pharmacopœia. Let a fair trial be made of the preparation as a galactagogue. It should be used, I would suggest, in

small doses, frequently given and largely diluted with warm water.

Whether, however, this suggested experiment succeeds or not, nothing will shake my confidence in freshly made "cotton leaf tea," as by far the best excitant of the mammary secretion that I have ever met with.

The PRESIDENT thought that the suggestion might be very useful, and hoped that other Fellows of the Society resident abroad would follow Dr. Anderson's example, and send us notice of any local drugs of value unknown to us.

Dr. GODSON said that he had been promised by the author some of the fresh leaves, and he hoped to be able to try their effect and lay the results before the Society.

FOREIGN BODY IN THE VAGINA, REMOVAL AFTER FOUR YEARS, AND AFTER-RESULTS.

By CHARLES H. CARTER, B.A., M.D. Lond.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN,

AND

FREDERICK H. DALY, M.D.

THE following case appears to the Reporters of sufficient interest to bring before the Society, as showing how long a time a foreign body may remain in the vagina, the immediate effects it may produce, as well as the serious results that may follow during labour.

L. H—, æt. 17, a pale, anæmic, thin girl, though tall for her age, came under Dr. Carter's care at the out-patient department of the Hospital for Women in February, 1875. Her mother stated that she had been regular since thirteen, and that soon after she had a greenish watery discharge, which was often pinkish, and of late had become very offensive. The last six months she had been at Ramsgate for her health, having been advised to go there by an eminent

obstetric physician who had seen her in consultation. The bowels acted regularly and without pain, micturition was natural but frequent; the discharge was so abundant, that she always needed to wear a diaper. Over the arms and legs chiefly, but also on the trunk, were a number of ecthymatous patches. She was ordered an injection, a tonic, and cod-liver oil, no examination being then made. In April, as the patient complained of the same discharge, an examination was made, and then she stated that soon after she was first unwell, she passed a "reel" into the vagina to stop the flow and that it had remained there since. On vaginal examination there was no hymen; the finger passed about an inch, when apparently the vagina ended in a *cul-de-sac*, the walls anteriorly and posteriorly being adherent, and a thick, more or less irregular mass of cicatricial tissue was felt; no opening could be detected by the tip of the finger, and nothing was made out through the cicatricial tissue, though by pushing upwards a great quantity of purulent discharge escaped, showing that there was some opening. By rectal examination the rim of the reel and the smooth rounded part could be made out. She was admitted into the hospital, and on May 13th she was anæsthetised, placed in the lithotomy position, a duck-bill speculum passed, and the cicatricial mass exposed, when an opening capable of admitting the point of the ordinary sound was seen. The cicatricial tissue was cut through with a blunt-pointed bistoury, and the rim of the reel grasped by the vulsellum and withdrawn without much difficulty. The reel was a large-sized one used for the sewing machine. The lateral walls of the vagina were then incised through, and about a quarter of an inch beyond, any indurated tissue, and the parts stretched by passing in several fingers. The uterus appeared in a healthy state; the cavity in which the reel had lain had somewhat the look of the walls of an abscess. The vagina was washed out with Condy's fluid, and plugged with strips of lint steeped in carbolised oil.

The patient did well after the first night, during which, through some loosening of the plug, free hæmorrhage

occurred, so severe that Dr. Carter was sent for. She left the hospital on the fourteenth day quite well, but the vagina had contracted at the line of incision so that only one finger could be passed. On leaving the hospital the mother was informed that if her daughter married, some further operation would be required.

In May, 1877, two years after, the mother brought her, saying she was engaged to be married and asking what was to be done. The patient was examined and the following note was made:—The vagina is narrowed at its entrance, then widened for about an inch, then contracting; the finger passes through a ring of tissue into a small *cul-de-sac*, at the upper part of which is an opening barely admitting the tip of the finger, and the os uteri is reached. She was again admitted into the hospital, and on June 7th was anæsthetised, placed in the lithotomy position, a duck-bill speculum passed, and the whole length of the contracted part of the vagina freely incised on both sides, cutting through the whole depth of any cicatricial or indurated tissue, and going some distance into the healthy tissue beyond; the passage was then dilated by passing several fingers, and then one of Dr. Marion Sims' glass dilators was passed and retained in position by a T-bandage.

There was but slight bleeding, and no constitutional disturbance followed. The vagina was daily washed out with Condy's fluid, and the dilator retained during the day. Four days after the operation the passage was found not at all contracted, the uterus was lower, and was helping to keep dilated the upper part of the vagina. The use of the dilator was continued, and the patient left the hospital wearing it. She was seen two months after and the passage had not contracted, and she was told to wear a larger-sized dilator. She again presented herself for examination in October, five months after the operation, and the vagina was much as when last seen. She was married in November, 1877, and about four months after she came saying she was pregnant. She was again seen two months after, at the sixth month, and as a band of cicatricial tissue could still be felt extending

about halfway round the vagina, and especially on the left side, it was thought that the fœtal head at term could scarcely pass without rupturing the vagina, and it was suggested that labour be brought on before the eighth month. To this she acceded, and as she lived near Dr. Daly the case was mentioned to him, and he kindly undertook to do what was necessary, quite agreeing with the advice that labour should be induced about the eighth month.

On July 5th, at 4 p.m., Dr. Daly introduced a bougie into the uterus, but in doing so unfortunately ruptured the membranes. One of Barnes' large bags was placed in the vagina to help in dilating it and stretch the cicatricial tissue. At 11 a.m. the next morning the patient was in strong labour, the pains coming on every few minutes and very severe; the os was nearly fully dilated and a hand presented by the side of the head. Attempts were made to replace it again and again, but without success. The head now became arrested by the cicatrix which, when on the stretch by the advancing head, appeared to extend about three fourths round the vagina, and stood out like a hymen; it was hard as gristle in front and absolutely unyielding. At 3 p.m. Dr. Long, Dr. Daly's partner, gave chloroform, and Dr. Daly applied the long forceps; but no amount of justifiable traction would bring the head through the cicatrix. It seemed as though the vagina would be dragged away sooner than that the head would pass. So, whilst the head was kept tightly bearing upon the cicatrix with the forceps by Dr. Daly, Dr. Long, with a curved, blunt-pointed bistoury, divided the cicatrix in front and at the sides; the head was then extracted without difficulty. The child was living, but died six hours after birth. The mother had no bad symptoms. The vagina was washed out at frequent intervals with Condy's fluid. Dr. Daly attended the patient in her second labour on the 14th of June, 1879. When seven months pregnant, Dr. Daly examined the patient and decided upon letting her go her full term, as, although some indurated tissue could be felt, yet the three incisions made during the first labour had destroyed the continuity of the cicatricial ring, and it was

probable that there would be no impediment to the dilatation of the vagina by the fœtal head. The result was as had been anticipated; the patient was delivered without any assistance of a living male child at full term, and made an excellent recovery. The child also is living.

A CASE OF LARGE FOREIGN BODY IN THE VAGINA FOR TWO YEARS, PERFORATING THE POSTERIOR WALL OF THE BLADDER, ITS REMOVAL AND CLOSURE OF THE FISTULOUS OPENING.

By Charles H. Carter, B.A., M.D. Lond.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN.

A. E. M—, a young unmarried woman, æt. 20, was sent to me at the Hospital for Women, by Dr. Stanley Smith, on July 8th, 1879, with the following history. She had been ill for over eighteen months, during which time she had not menstruated, though up to this time since the age of thirteen she had been regular. During the eighteen months she had had pain in the back and hips, made worse on movements of any kind; a slimy and offensive discharge from the vagina, and the urine was constantly running from her; also there was pain upon defecation. The appetite was bad, the patient anæmic and emaciated, with the look of one who was constantly suffering. On examination, the urine was running from the vagina, the parts otherwise natural, but covered with muco-purulent discharge. A sound passed into the bladder grated against a hard mass; a catheter was then passed and the bladder was found empty. By vaginal examination, a hard, somewhat irregular mass was felt with many sharp edges, evidently a thick phosphatic deposit upon some foreign body. By careful manipulation the concretion was made out to extend into the bladder through a wide opening,

and the sound in the bladder was moved on pressing the mass in the vagina. By rectal examination, the vagina was filled by a long rounded hard body, lying somewhat obliquely. She was admitted as an in-patient July 10th, and at first denied all knowledge of the cause of her illness; this she had previously done when questioned by Dr. S. Smith; then she stated that two years ago she passed the metal cup of a drinking flask into the vagina; at first it caused her great pain and some bleeding, but this latter soon stopped. It was not till six months after this that the urine began to run away, and during this six months she was regular and only had a discharge from the vagina.

On the 17th she was anæsthetised, and the foreign body was with some difficulty removed, chiefly on account of the vaginal walls being contracted round the sharp rim of the cup, and also from the resistance offered by the phosphatic mass extending from the coating of the cup into the bladder; this mass had first to be broken off, and then by continued and careful drawing the cup came out; the detached piece in the bladder was then removed through the rent in the posterior wall.

The following is the report of Dr. Gabbett, the pathologist of the hospital, upon the specimen, and he has also kindly made two drawings of the cup and its appendages:—"The specimen consists of a metal (pewter ?) cup, originally the top of a drinking flask, covered and filled with a phosphatic incrustation; a separate solid phosphatic fragment, 1½ inch in length and breadth, by ¾ inch in thickness; and a number of smaller fragments and sabulous matter, mixed with mucus in the recent state. The weight of the whole is 5¾ ounces. The cup measures 2¼ inches in height, diameter at brim 1¾ inch, at base 1¼ inch. A part of the exterior below the lip is free from incrustation, and in the neighbourhood the phosphatic coating is thin and smooth, as if the cup had here lain in close apposition to the vaginal wall. At other spots also the surface of the cup is clear, the deposit having been accidentally broken off. The incrustation at one side is nearly ¾ inch in thickness. The interior is filled with the

same material, leaving at one side a cavity admitting the finger with soft crumbling walls. The large fragment is marked by a semilunar excavation, which can be fitted to the cup near the brim. When the pieces are put together, the shape of the entire object is as represented in fig. 2—the inverted cup occupies the vagina, and the large fragment projects through the opening into the bladder."

After the operation the bladder and vagina were washed out with Condy's fluid and all the *débris* removed; the bladder was much contracted, with an opening into it from the vagina about 1½ to 2 inches in breadth, extending from side to side of the vagina. The patient was put to bed and for ten hours after the operation retained her water, being able to pass it when she wished; but the next day the dribbling occurred as before, though not to the same extent, as she was able to retain some water in her bladder and pass it naturally. She improved much in general health and was up and allowed to walk out.

On August 14th the patient was anæsthetised and placed in the lithotomy position; the opening into the bladder seemed to have somewhat narrowed, the margins were pared for about one third of an inch in breadth, and brought together by nine silver wire sutures. She was placed in bed and the catheter passed every six hours. On the 16th the temperature went up to 102° and 103°, and the bladder and vagina were washed out. On the 19th there was free hæmorrhage from the vagina, the bladder was full of clots, and urine dribbled from the vagina. The bladder was washed out with Condy's fluid and opium, and a catheter left in. This was continued at frequent intervals for the next two days, the urine still dribbling, but on careful examination it was now found to run by the side of the catheter. From this time she did well, and on the 25th the stitches were removed and the posterior wall of the bladder was found perfectly sound. During the next few days the dribbling from the urethra continued, but the patient was able to hold her water two to three hours. She was discharged on September 3rd perfectly well, being able to retain her water four to six hours.

She presented herself for examination on December 2nd, and said she was quite comfortable, and able to hold her water well and not disturbed more than once of a night through it, and her general appearance was much improved, and she looked fat and strong. She had menstruated once since leaving the hospital three weeks previously. The vaginal examination gave a slight puckering on each side of the passage where the fistulous opening ended, so causing a contraction, but not very marked, of the vagina.

Dr. EDIS observed that in the cases just read the foreign bodies had been wilfully placed within the vagina. He had met with several instances where pessaries had been placed by practitioners in patients, which had been allowed to remain unnoticed and uncared for during many years. In one case a large oval pessary, the size of a goose's egg, was removed after it had been in eleven years. The patient presented symptoms of uterine cancer—pain, hæmorrhage, offensive discharge—for which she presented herself, being ignorant of the presence of the pessary.

Dr. DALY regretted that Dr. Carter was not present. There were two points in the paper upon which he wished to say a word of explanation. The first was the accidental rupturing of the membranes by the bougie. This was unfortunate, but almost unavoidable, owing to the difficulty of manipulation, in consequence of the uterus being high up and the vaginal stricture necessitating the performance of the operation through a narrow unyielding strait. The other point was the failure to return the prolapsed hand, but here, again, the rigid cicatrix interfered so with free manipulation as to render the return of the hand impossible.

The following gentlemen were proposed for election:—F. J. Bailey, L.R.C.P. Lond. (Liverpool); Robert C. Benington, M.R.C.S. (East Dulwich); Robert Bruce, Junr., M.R.C.S., John Blount Fry, L.R.C.P. Lond. (Swindon); Thomas Hamilton, M.D., C.M., John Oakley, M.R.C.S. (Halifax); and Frederick E. Pocock, M.D.

Dr. Herman showed a fibroid tumour of the vagina. It was removed from a patient, aged forty, who had been married seventeen years, but had never been pregnant. The catamenia were regular, but copious; she had had flooding two years ago, but not since. The tumour was about the size of a walnut, and was situated in the anterior vaginal wall, just behind the meatus urinarius. It protruded slightly through the vaginal orifice, making the patient think that her womb was coming down, and it was for this symptom that she sought advice. An incision was made over the tumour, and it was easily dissected out, chiefly with the handle of the scalpel. There was no hæmorrhage to speak of, and the wound healed without any bad symptoms. On microscopical examination, the structure of the tumour was found to be that of a fibro-myoma.

Dr. Herman also showed a specimen of a missed abortion, with slight cystic degeneration of the chorion. The patient was aged thirty-four, and had had one child five years previously. She ceased to menstruate in October, and began to have the usual symptoms of pregnancy, morning sickness, &c. In February (at which time she thought herself five months pregnant) she began to have slight pale red discharge, and pains like those of labour except in severity. On examination, the uterus was found to be about the size of one three months pregnant, and acutely retroflexed. In June it was found still of about the same size. The patient continued to suffer from slight pain, and had not menstruated. A sound was therefore passed into the uterus. A fortnight afterwards the mole exhibited was expelled. It was a mass of about the size of a hen's egg, consisting partly of slightly

decolorised clot, and partly of a number of little white vesicular bodies connected by slender stalks, like those seen in cystic degeneration of the chorion. This mass was enclosed in a membrane, apparently the decidua reflexa, and outside this was another membrane, free for part of its extent, seemingly the decidua vera.

Dr. HERMAN also showed some specimens of the so-called apopletic ovum.

Dr. ROPER exhibited a specimen of supplementary placenta, the size of the palm of the hand. The supplementary portion was developed two inches distant from the main placenta. No large vessels could be observed as proceeding from the supplementary placenta to contribute to the fœtal circulation. Also, a cupped placenta of accidental hæmorrhage, at the seventh month of pregnancy. A rim of sound placental tissue existed all round the circumference of the placenta, while its central portion was deeply cupped, and its structure disrupted by infiltration of blood.

Dr. HEYWOOD SMITH exhibited a belt for use after ovariotomy. It combined the advantages of opening in front with buckles and straps, and at the same time having laces at the back. Patients are thus enabled to put it on when lying down, whereby the abdomen is kept flat, and after the straps are fastened the laces can be drawn tight, and a comfortable fit is thereby secured. It is made by Russell, of George Street, Portman Square.

Dr. HEYWOOD SMITH also showed a grappling iron for use in cases of hysterotomy, or the removal of large solid ovarian tumours. In use it is suspended by over-head gear above the operation table. On the tumour being drawn out of the abdomen the grappling iron is applied, and the tumour held up in such a position that ligatures to its base can be easily applied, and the supporting of a heavy tumour by an assistant obviated.

Dr. Heywood Smith then called attention to an improvement in his ovum forceps. These forceps, fenestrated longitudinally, are so constructed that when the handles are firmly closed, the spoon-shaped blades are closed all round, thereby facilitating the removal of pieces of placenta, &c. The improvement consists in the joint, which is that employed by Spencer Wells' artery forceps, whereby the blades can be separated and each portion used separately as a spoon or scoop.

Dr. Heywood Smith lastly exhibited an improved duck-bill speculum. It consisted of three portions, any two of which could be easily joined together in the form of Marion Sims' speculum. The points of novelty were that whereas Mr. Sims' speculum turns up at the end, forming a cup-shaped extremity, Dr. Heywood Smith's speculum had its ends open to facilitate the plugging of the vagina with the speculum *in situ*, and to prevent the plug being drawn out on withdrawal of the speculum, and giving a wider field of observation. One of the blades was also made much shorter than those of Marion Sims'; this enabled the uterus to be drawn down with the hook much lower than in the ordinary form, for with a long blade the pressure on the posterior vaginal wall prevented, to a certain extent, the descent of that wall. When the two portions of the speculum are separated they may also be used as the speculum of Neugebauer.

Dr. Roper said that many forms of ovum forceps had previously been exhibited before the Society. He was unable to see that the forceps exhibited poesessed any advantage over the ordinary speculum forceps. This, like all others, was constructed on theoretical principles; it was assumed that the body which the forceps had to grasp was ovoid, and solid enough to retain its shape, like a calculus or a fœtal head. The ovum, on the contrary, was a fragile body, which nearly certainly breaks down when the forceps is used to extract it. The really scientific way of removing an ovum was with the finger; for, where the forceps could enter, the finger could go. The real danger in abortion was from flooding. After disruption of the ovum, the flooding depended upon adhesion of a small por-

tion of placenta. When the ovum was entire and sticking in the os, flooding was rarely present, and the ovum could generally be removed by the administration of ergot and the ordinary speculum forceps. In removing a portion of placenta by means of the finger, care must be taken to use counter-pressure on the fundus through the abdomen, so as to prevent laceration of the vagina near its attachment to the uterus. In very fat women such counter-pressure on the fundus could not always be satisfactorily made. In such cases, it had been his practice to draw down the uterus, and hold it down by a hook or vulsellum inserted into the anterior lip. Professor A. R. Simpson has written a very able paper on this subject, in which he had advocated this method of treatment.

Dr. CHAMPNEYS said that no doubt the most troublesome cases of hæmorrhage after abortion are those in which the os uteri is contracted; but he thought that the persistence of the bleeding depended not so much upon the obstacle thus formed to the access of the finger, and the extraction of the ovum, as on the conditions of "uterine polarity" enunciated by Reil at the beginning of this century. This "uterine polarity" is exemplified by the antagonism which exists between the two poles of the uterus, contraction of one being accompanied by dilatation of the other. It is well known that some cases of uterine hæmorrhage are stopped simply by dilating the cervix.

Dr. GALABIN showed microscopic sections to illustrate the histological characters of the uterine mucous membrane in endometritis of the body of the uterus, as to which nothing was said in most text-books. The specimen was taken from a woman, aged thirty-eight, who died from septicæmia twenty-one days after an operation for strangulated hernia. During her illness she had a profuse vaginal discharge of a somewhat rusty tint. Menstruation came on two days after the operation, and continued four days, ceasing fifteen days before death. At the autopsy softening of spleen and liver was found, but no peritonitis. The body of the uterus contained rusty-looking mucus, and its mucous membrane was seen to be intensely injected with blood. A corpeus luteum of menstruation, five sixteenths of an inch in its greatest diameter, was found in the right ovary.

The microscopic sections showed the inflammatory change to be chiefly in the epithelium of the glands, and of the surface of the uterus, while little alteration was seen in the

inter-glandular stroma, except that there were numerous vessels distended with blood immediately beneath the surface. The surface epithelium had lost its regular columnar character, and the cells were proliferating irregularly, many of them being rounded in shape. The epithelium of the glands was proliferating in the same way, and showed various transitions from the columnar to the round shape. The lumen of the gland-tubes was generally filled up with round cells, and, at many points, nothing but round cells could be seen in the tube. The absence of more noticeable changes in the inter-glandular stroma was probably to be explained on the ground that the normal stroma of the uterine mucous membrane is closely allied to embryonic tissue, and, therefore, to the formative variety of inflammatory tissue.

The history of the case and the pathological condition appeared to show that the inflammation was of a somewhat acute character, and the result of the septicæmia. But there were signs that some chronic inflammation had preceded. There was an ordinary granular erosion of the cervix, of an evidently chronic character. Also there was a localised proliferation of gland tissue in the body of the uterus, dipping into the muscular wall to more than a quarter of an inch from the surface. This somewhat recalled the mode of origin of cylindrical epithelioma of the body of the uterus, except that there was no proliferation of epithelium different from that seen at other parts of the mucous membrane.

Annual Meeting.

The following proposed alterations in the Bye-Laws were read by the secretary:

Chapter II.—Of the Election of Ordinary Fellows.

The first four Sections to be altered as follows:—Those parts within brackets to be omitted, and the words in italics to be inserted. Sections V and VI to be respectively numbered IV and V.

I. Every Candidate for admission into the Society as an Ordinary Fellow shall be proposed and recommended by three or more Fellows, who shall deliver a paper signed by themselves to one of the Secretaries, specifying the Christian and Surname of such person, his professional qualifications and whence obtained, together with his usual place of residence, and certifying from the personal knowledge of at least two of their number that he is in their opinion a fit and proper person to be elected a Fellow.

Every such recommendation shall be read aloud by the President at the Ordinary Meeting of the Society next ensuing, and shall be suspended in the Library or other Common Meeting-room of the Society [for one meeting at least, exclusive of that at which it was presented, and shall remain suspended] until the Ballot for election shall take place.

II. [A list shall be sent to each resident Fellow fourteen days before the day of election, containing the name of every candidate whose recommendation has been suspended in accordance with the preceding law; which list shall specify the Christian and Surname of such person, his professional qualifications and whence obtained, his usual place of residence, and also the names of the Fellows who have recommended him to the Society for election.] The election of Fellows into the Society shall be by ballot, and [the election] shall be taken in such manner as the Council shall from time to time determine; and no person shall be declared elected unless [he have in his favour the votes of two thirds of the Fellows present] *two thirds of the votes be in his favour*, fifteen Fellows at the least being present. [The election of Fellows shall take place at alternate meetings of the Society, and the ballot shall be taken in the presence of not less than two Members of the Council, and the result shall be declared by the President or Fellow presiding.]

III. Every person elected a Fellow of the Society [shall, if he live], *if residing* within four miles of Charing Cross [be held to be a Resident Fellow, and shall have immediate notice of his election sent to him by one of the Secretaries], *must be admitted by the President, or Fellow officiating in his stead,*

and shall appear for his admission on or before the third Ordinary Meeting of the Society after his election, or within such further time as shall be granted by the Council on special application to them for that purpose; otherwise his election shall be void.

[IV. Newly elected Fellows, if residing within four miles of Charing Cross, must be admitted by the President, or Fellow officiating in his stead, at an Ordinary Meeting of the Society.]

Chapter X.—Of the Secretaries.

Add at the end of Section II:

"*They shall submit to the Council before nomination all proposals for ordinary Fellowship.*"

Chapter XVI.—Of the Ordinary Meetings.

Add at the end of Section I:

"*but the Council shall have authority to alter the day of Meeting of the Society from the first Wednesday in the month to a subsequent day, when the first Wednesday may for some special reason be inconvenient.*"

It was then moved by Dr. Meadows, and seconded by Dr. Rogers:

"That the alterations in Chapters II, X, and XVI of the Bye Laws just read by the Secretary, and notices of the details of which had been previously circulated among the Fellows with the annual notice, be now adopted, and the necessary changes made in the aforementioned Chapters of the Bye-Laws."

The President announced that the Scrutineers had examined the lists, and reported that the following gentlemen had been elected as officers and council for the ensuing year.

Honorary President.—Arthur Farre, M.D., F.R.S.
President.—William S. Playfair, M.D.
Vice Presidents.—John Bassett, M.D. (Birmingham);

Arthur W. Edis, M.D; John Baptiste Potter, M.D.; George Roper, M.D.; John Williams, M.D,; Robert James Wilson, F.R.C.P. Ed. (St. Leonards).

Treasurer.—Henry Gervis, M.D.

Honorary Secretaries.—Clement Godson, M.D.; Alfred Lewis Galabin, M.A., M.D.

Honorary Librarian.—George Ernest Herman, M.R.C.P.

Other Members of Council.—John Wright Baker (Derby); R. S. Fancourt Barnes, M.D.; Percy Boulton, M.D.; Charles Henry Carter, M.D.; Francis Henry Champneys, M.A., M.B.; Richard Cross, M.D (Scarborough); Robert Cory, M.B.; James Matthews Duncan, M.D.; George Eastes, M.B.; William Thomas Greene, M.A., M.D.; Henry Walter Kiallmark; C. Dudley Kingsford, M.D.; David Lloyd Roberts, M.D. (Manchester); Frederick William Salzmann (Brighton); Thomas Savage, M.D. (Birmingham); Charles Brodie Sewell, M.D.; Thomas James Walker, M.D. (Peterborough); Frederick Wallace.

The Report of the Treasurer, Dr. Gervis, with the audited balance sheet, was then read.

Moved by Dr. Aveling, and seconded by Dr. Herman:
"That the auditors' report be received and adopted."

The Report of the Librarian was then read, and its adoption was moved by Dr. Roper, seconded by Dr. H. Smith, and was carried unanimously.

Report of the Honorary Librarian for 1878.

The number of readers in the Library, and the number of books taken out by Fellows, have been fully maintained during the past year.

The additions to the Library amount to 136 volumes, of which 47 have been presented, and the rest acquired by purchase. The total number of volumes now in the Library has thus been raised to 2367.

As a certain number of duplicate volumes existed in the

BALANCE-SHEET OF THE OBSTETRICAL SOCIETY OF LONDON.

(Abstract of the Receipts and Expenditure for the year ending December 31st, 1879.)

1879. RECEIPTS.		£	s.	d.
To balance in hand from balance-sheet for 1878		180	12	5
(1). SUBSCRIPTIONS received during 1879: 622 at £1 1s.		653	2	0
(2). COMPOSITION FEES: 2 at £10 10s.		21	0	0
(3). MIDWIFERY EXAMINATION FEES		12	17	0
(4). SALE OF TRANSACTIONS		62	1	8
(4*). Sale of Duplicate Books from Library, &c.		3	9	6
(5). INTEREST on 3 per cent. consols:				
January, 1879	£17 18 9			
July, 1879	17 18 9			
		35	17	6
Amount of stock, 3 per cent. consols, standing in the names of the Trustees:				
January, 1880	£1221 6 0			
		£969	0	1

Audited and found correct by
G. B. MURRAY,
ROBERT CORY,
F. H. CHAMPNEYS.

By EXPENDITURE.		£	s.	d.
(1). TRANSACTIONS, VOL. XX:				
Printing, Lithography, Paper, and Binding, Composition of Index, Donation Lists, &c., and delivery of Volumes (including the Binding of remainder of Vols. XVIII and XIX)	£305 11 0			
(1*). OTHER PRINTING:				
Rules for Management of Infants and Bye-laws	39 3 0			
		344	14	0
(2). LIBRARY:				
Books Purchased and Binding		48	9	0
(3). MUSEUM AND LIBRARY:				
Rent, Salaries, Furniture, Petty Cash, Insurance, &c.		283	14	0
(4). COMMITTEES:				
Transfusion Committee—Payments		40	0	0
(5). GENERAL MEETING AND OTHER EXPENSES:				
Meeting-room, Expenses of Meetings, Collection of Subscriptions, Postage, Stationery, Shorthand Notes of Discussions, Legal Expenses, &c.		156	19	2
Balance in hand at Bankers		95	3	11
		£969	0	1

CLEMENT GODSON, *Hon. Sec.*

Library, obtained either through the acquisition of Dr. Blundell's collection, or in other ways, a list of these duplicates, with prices affixed, has been drawn up by the direction of the Council. These books have been offered for sale to the Fellows, and 19 have been sold, producing the sum of £3 7s. 6d., but 85 still remain unsold.

The limit of space on the shelves of the Library has been nearly reached, and it has already been found necessary to store some volumes which are rarely called for in the upper room, in which the Arthur Farre collection of models is, for the present, deposited. Since no wall space for new shelves remains in the Library, the question of additional accommodation for books is still urgent. If the Society should long continue to retain its present rooms, the only possible expedient would seem to be the erection of book-cases in the additional room before mentioned.

ALFRED L. GALABIN, M.D.

The Examination of Midwives.

The Board established by this Society for the examination of midwives has performed its duties for eight years, and during this time fifty-four candidates have presented themselves for examination. Of this number forty-seven satisfied the examiners, and seven were rejected.

As a rule, the candidates are well-educated women, and many sustain their examinations with great ability. It is exceptional to meet with one from the working classes—a few, however, have come, and displayed good practical knowledge of their calling. It is unfortunate that the latter class, the one which it is most necessary to reach, should be the one which so seldom seeks our Diploma.

During the present year (1879) thirteen candidates have come up for examination. This is a much larger number than the average, which is six, as may be seen by the following table :

		Candidates.		Admitted.		Rejected.
1872	...	8	...	6	...	2
1873	...	12	...	11	...	1
1874	...	4	...	4	...	—
1875	...	3	...	2	...	1
1876	...	4	...	3	...	1
1877	...	4	...	4	...	—
1878	...	6	...	5	...	1
1879	...	13	...	12	...	1
	Totals	54	...	47	...	7

It appears, therefore, that the tentative action of the Society, in providing a public test for skilled midwives, has been useful only to a very limited extent; and that nothing short of legislative measures can insure the instruction of the hundreds of women who practise midwifery in this country. It is most desirable that the Council should not relax in the laudable exertions which it has, during the last few years, been making to induce the Government to recognise the importance of ameliorating the present condition of midwives, and providing for the safety of poor women in child-birth. A Bill devoted entirely to this subject, and not connected with any scheme for medical reform, would have the best chance of being speedily dealt with by Parliament.

J. H. Aveling, M.D.,
Chairman of the Board for the Examination of Midwives.

A vote of thanks to Dr. Aveling was moved by Dr. Williams, seconded by Dr. Godson, and carried unanimously.

The President then delivered his Annual Address.

ANNUAL ADDRESS.

GENTLEMEN,—The task allotted to your President of annually addressing you on the work as prospects of the Society is now fortunately always a pleasing and an easy one, since he has, year by year, to tell the same tale of continuous and increasing prosperity. Since our last meeting we have elected fifty-nine new Fellows, while we have lost thirty-one by death and resignation, the Society now numbering in all 774 Fellows. The Reports you have heard read give satisfactory proof of our financial prosperity, and of the working of the Library, which for some years has formed an important part of our organisation, and which promises, ere very long, to be one of the most valuable centres for obstetric reference in the country. I claim the right to a special interest in its well-being, since I had the honour of holding the office of Honorary Librarian when it first received a local habitation, and had much to do with its arrangement.

We have to-night, for the first time since its formation eight years ago, received a Report from the Board for the Examination of Midwives. The Council of the Society has always felt that an improvement in the training of women acting as midwives was a question of really national importance, and most of you must have had opportunities of becoming personally acquainted with the injury to the public arising from the crass ignorance of the women who attend on the poor during their time of trial. It always seemed to it a great and a crying scandal that in a country such as ours every ignorant old woman who chooses to assume the name of "midwife" might practise at her own free will without let or hindrance. In founding an examination the Society had no intention of assuming to itself legislative functions, but it hoped that its action might direct public attention to this question, and that the Legislature might eventually take the matter in hand. There is good ground for believing that

a Bill on this subject will ere long be submitted to Parliament, and, in that case, our scheme of examination will be useful as indicating the lines on which such a measure should be based. Early in the year I had the honour of heading a deputation to the Lord President of the Council urging the necessity of this on the Government, which was courteously and favorably received. The Government had already taken this matter into consideration in their Medical Bill, in which there was provision for the formation of a Register of Midwives, which was, however, simply permissive, and would have been practically useless. When the question is settled, our Board of Examiners will, I am sure, gladly perform the operation of the "happy despatch," and cease their functions. In the meantime I should like to point out that something may be done by our principal Lying-in-Institutions, which have been, doubtless unwittingly, great offenders. As matters at present stand in many of these, any ignorant and superannuated old woman, who thinks the practice of midwifery would be a comfortable provision for her old age, goes to a hospital, pays a moderate sum, sees a few labours, and comes away with a certificate a yard long stating that she is a duly qualified midwife or nurse. In the General Lying-in Hospital, where I am Consulting Physician, the Committee has, on my motion, passed a resolution that for the future the only certificate given shall be one of tuition, and that only after six months' training, and that no woman shall be admitted after thirty-five years of age. For a certificate of proficiency, pending the action of the Government, the pupils are recommended to take the Diploma of our Society. If such a course were adopted by other similar institutions, I venture to think that much good might be done.

The meetings during the past year have been well attended, and the many interesting papers submitted to us, and the valuable discussions they gave rise to, show that, in this respect, the Society is in no danger of losing its well-earned reputation. I cannot presume to trespass on your kindness by any lengthy abstract of what has been done, but there

are one or two subjects which have been brought before us which specially merit a brief notice on this occasion.

We have had several communications illustrative of the *quæstio vexata* of the proper treatment of extra-uterine fœtation of the tubal variety. Supposing this to be satisfactorily diagnosed, and it is not so rare in these days as formerly that the diagnosis should be made out, no question can be more momentous than the decision as to the proper course to pursue. Dr. Priestley brought forward a case showing the advantages of an expectant treatment. The extra-uterine pregnancy was made out, nothing was done, and twelve years afterwards the fœtal bones were expelled, after much constitutional disturbance, through an aperture in the roof of the vagina. I must frankly confess that this practice does not commend itself to my judgment; for, given a tubal fœtation, the chances are immeasurably greater that the sac should rupture, than that it should remain quiescent for so many years, and the hope that it will do so is a slender reed, indeed, to rest upon. Moreover, the constitutional irritation attendant on efforts at spontaneous elimination would probably expose the patient to risk quite as great as those accompanying some more active form of interference as soon as the complication was detected. Dr. Routh contributed a paper on a somewhat similar case, in which aspiration was frequently resorted to, with the view of arresting the growth of the fœtus, which, however, it did not succeed in effecting, since the sac subsequently ruptured. This procedure has frequently been tried, and aspiration is so simple and harmless that there can be no objection to it *per se*, but Dr. Routh's case suffices to prove that it is not reliable, and, moreover, it has the disadvantage, even when the fœtus is destroyed, of leaving it *in sitû* with the risk of subsequent spontaneous elimination, as in Dr. Priestley's case. There remain the alternatives of removing the fœtus from the sac, either by abdominal section, or by section through the vagina with the galvano-caustic knife, leaving the placenta attached, an operation which has more than once been successfully performed in America. If there were a fair

chance of being able to remove the whole mass, cyst included, the former, with strict antiseptic precautions, would probably be preferable, and would be no more dangerous than, and not so difficult as, ovariotomy. Unfortunately the cyst is generally so firmly united by adhesions to the surrounding parts that its removal cannot reasonably be expected, and the drainage of the emptied cyst through the abdominal opening would be more difficult than through the vagina, where the aperture is made through its most dependent part. For this reason I am inclined to think that Thomas's operation by galvano-caustic is the procedure which, in the present state of our knowledge, offers the best hope of a successful result. The chief risk is hæmorrhage; but this is less when the tissues are burned through, than if they were divided by the knife, as in abdominal section. It is the procedure I had determined to adopt in a case which I narrated to the Society, which both Dr. Braxton Hicks and myself believed to be probably one of extra-uterine fœtation, but which the use of the sound demonstrated to be a retroflexion of the gravid uterus. It well illustrates, I think, both the difficulty of diagnosis, and the value of that instrument in settling the nature of the suspecting swelling. The same doubt is mentioned in both Dr. Priestley's and Dr. Routh's cases, and clearly no steps should ever be taken until the state of the uterus is positively determined in this manner. I have ventured to comment upon these communications since the subject is of great importance and comparatively new, so that we are still much in want of positive rules for our guidance when such anxious cases come under our care.

No less than three evenings were spent, and I am sure they could not have been more profitably employed, in the discussion on the use of the forceps, which was so ably introduced by Dr. Barnes. The crowded room, and the fact that many eminent obstetricians travelled long distances—from Dublin, Edinburgh, and Aberdeen—to join in the discussion and give us the benefit of their experience, indicate in the strongest way the interest which the profession takes in this great practical question, and fully justify the action of the

Council in selecting it as a topic of debate. Nothing can possibly be of greater use than this free interchange of opinion amongst so many leaders in obstetric science from different schools, and, to my mind, this, and the analogous discussion on puerperal fever which preceded it, constitute some of the most useful work which this Society has accomplished during its existence. I shall not trespass on your patience by a detailed analysis of the debate, since you will very shortly have the opportunity of refreshing your memories with regard to it in the forthcoming volume of the 'Transactions,' where you will find it printed *in extenso*. To myself it was of special interest, since, having paid a good deal of attention to the subject for many years, and having spoken and written of it oftener than was perhaps judicious, I am aware that some of my friends credit me with being an uncompromising champion of frequent forceps delivery. I was interested, therefore, to find, and it marks, I think, a distinct advance in professional opinion, that the speakers took almost for granted the advisability of operating soon rather than late in the only class of cases in which I have ever recommended a more frequent use of the forceps than has been customary—viz. those in which the head was arrested low down in the pelvis, or on the perinæum, simply from a deficient "vis a tergo." The unanimity with which this was assumed as a proper course of procedure might almost have made some of our respected predecessors, who would have regarded such practice with horror, turn in their graves. With the exception of Dr. Daly, however, no speaker alluded to what has always been, to my mind, a strong justification of early interference in the hands of a competent operator, and to no other can our remarks refer, and that is the relief of the horrible sufferings of labour. It is the clear duty of the accoucheur to diminish the pains, as well as the perils, of childbirth, and I have never been able to understand how we are justified in allowing our patients to drag on many weary hours in useless suffering, when they might be speedily and safely delivered. The only reasonable objection to this teaching, and it is one the force of which I willingly concede, is that

a semi-educated and stupid practitioner may fail to recognise the distinction between this most simple and safe procedure, and the much more formidable cases in which the head is high in the pelvis. The answer to this is that we must lay down a rule of practice for the intelligent and well-taught, not one which renders ignorance and incapacity safe. If it were necessary for surgical or obstetrical science that no practice should be advocated which could do harm in the hands of the incapable, all hope of progress would be at an end. Rather let it teach the lesson that more time and care should be devoted to the instruction of the student in a department of practice in which so much of his future work is to be spent—a lesson which those who regulate our examinations require to lay to heart far more than our teachers of midwifery. To the other great point in the debate—I allude to the application of the forceps with the head high in the pelvis, and the os undilated—I venture to think far too great prominence was given. From the way in which it was discussed one would almost fancy it was considered by some to be an everyday practice, and the inexperienced might thus readily be misled, to the serious detriment of their patients. While I do not deny, nay, while I readily admit, that in certain well-selected cases, in the hands of those who are expert in the use of the instrument, the operation is fully justifiable and may lead to the best results, yet I know of few procedures requiring more judgment, skill, and caution; and I believe that such a use of the forceps cannot be fenced round with too great care. Nor, indeed, are the cases in which it is even to be thought of, unless the experience of others be very different from my own, of any but the rarest occurrence. I am satisfied, however, that a superficial perusal of the debate would scarcely lead to that conclusion, and I think that the eminent surgeon who remarked to me that he was horrified to find that accoucheurs were so frequently in the habit of applying the forceps within the uterine cavity, was not altogether unreasonable in the deduction he drew from reading our discussion. Dr. Roper's observations on the results of this practice in the Rotunda

Hospital struck me forcibly. Based as they were on statistics, which so readily adapt themselves to proving whatever we desire, they may possibly be susceptible of refutation; but the answer to them, if an answer is to be made, has not yet appeared.

An important event in the history of the year is the Report on Transfusion, which was presented at our December meeting by Dr. Schäfer. The Society will remember that some years ago a Committee was appointed to investigate the subject, under the presidency of Dr. John Hall Davies. After holding several meetings the Committee found that the practical difficulties in coming to any satisfactory conclusion were so great that little could be done without physiological experiments, which naturally could not be performed by them. They therefore arrived at the resolution that it was better to entrust the investigation of the subject to an experienced physiologist, and Dr. Schäfer was selected for the purpose, a grant of £70 from the funds of the Society being allotted to him to cover the expenses of the necessary experimental inquiries. The wisdom of this course is amply proved by the deeply interesting and instructive Report which was read to the Society. I may say, without fear of contradiction, that this is by far the most valuable contribution to the study of the operation with which medical science, in this country at least, has been yet enriched. Hitherto all that has been done in reference to the subject has been merely empirical or theoretical, and the want of accurate observations has done much to prevent this valuable operation being as frequently performed as it might have been. Now, for the first time, the profession has some reliable data to act upon, and it may be well to point out how triumphantly such a Report disposes of the short-sighted and ignorant action of those who would put a stop to experiments of all kinds on living animals, without which such increased knowledge as we now possess of the best means of performing this operation could not possibly have been acquired; and, as the direct result of which, many invaluable lives may, in the future, be rescued from the very gates of death. The first important result of

this investigation is that it disposes, once and for all, on indisputable grounds, of the use of milk, beaf tea, and other fluids instead of blood. Within the last year or two, Dr. Thomas, of New York, and others in America, have published cases in which transfusion has been performed with such agents, of which the most that can be said is that some of the patients survived in spite of the operation. Dr. Schäfer's researches into the action of such fluids on the blood-corpuscles will, I cannot but think, insure our not hearing more of such experiments. The operation is one in which I have myself always taken great interest, and, after a careful study of all that had been written on the subject, I had come to the conclusion that the use of defibrinated blood, with a simple syringe, best fulfilled the indications which seemed to me essential for success—viz. simplicity of apparatus and ease of performance; and this was the method I had adopted in several cases in which I had performed it after severe post-partum hæmorrhage. Dr. Aveling's method of immediate transfusion I had not tried, theoretically good as it was, because the manipulations required seemed to me too complex for general use. Curiously enough, the use of defibrinated blood, so strongly recommended by many, is the one method which Dr. Schäfer seems not to have adequately discussed in his Report. Whatever his reason for this, I think, we must admit that he has so simplified the method of immediate transfusion from vein to vein, that every one who resorts to the operation for the future will prefer to try it. The apparatus costs next to nothing, it may always be carried in a corner of the obstetric bag ready for use on any unforeseen emergency arising, a point of no little importance, and the necessary operative procedures are so simple that no one need shrink from resorting to them. The same can hardly be said of the proposed method of transfusing from artery to artery, in which I confess I see much practical difficulty. I think you will agree with me that the Society has good cause to congratulate itself on its action in directing investigation to this important topic.

Mr. Lawson Tait submitted to us a new operation of a

very ingenious character for repair of the female perinæum. It did not, when read, seem to meet with the approval which, I think, a more careful perusal will show that it merits, since its details are, at first, not easy to understand. I am satisfied, however, that as regards one most troublesome class of cases—viz. those in which the recto-vaginal septum is lacerated, which I, in common with all who have had to deal with such cases, have found very difficult to manage—it promises very well. I mention it because I think many who heard the paper probably did not quite understand the method proposed, which, however, is easily enough mastered when carefully studied.

If I do not allude to other interesting communications which have been brought before us, it is only because they speak for themselves and require no comment from me. I regret, however, as others who have occupied this chair before me have done, that we have had no paper on the diseases of children. I know few subjects more requiring elucidation, and offering a more promising field for investigation. It is, moreover, peculiarly within the province of the Society, and I am not without hopes that some of our Fellows, who hold appointments in connection with the numerous Metropolitan Hospitals for Sick Children, and there are many such on our list, will yet favour us with the results of their investigations in this important branch of medicine.

Unhappily no year passes in which your President has not the painful duty to perform of directing your attention to the losses the Society has to deplore by death, and to-night I have to mention to you rather more than the average number of those whose earthly work is over. Of some of these I have not been able to gather any information which I need record. Doubtless they led useful, hardworking, and honorable lives, endearing themselves to their friends and patients, although it was not their good or evil fortune to occupy positions of prominence. Amongst those of whom I can find no obituary notice are George W. Nicholls, of Rotherhithe, George Edward Horton, of Dudley, Charles Fryer, of Sherburne, Yorkshire, Edward Morgan, of Llanelly, George

Henry Waters, of Thatcham, near Newbury. Others, whose names are familiar to us from their public position, require more than a mere nominal mention.

Dr. Herman Beigel died at Vienna, in his forty-ninth year, from the effects of a carbuncle. He formerly practised in London, and was Physician to the Metropolitan Free Hospital. He was a man of indomitable perseverence and energy and of great talents, but, like many similarly gifted, he does not seem to have succeeded in the struggle for practice, and he relinquished the attempt at the outbreak of the Franco-German war, during which he served with much distinction, gaining for himself the coveted honour of the Iron Cross. At its close he settled in Vienna, where he established a Hospital for Women, and devoted himself more exclusively to gynæcological work than he had done in London, and I understand that he had succeeded, in the short time he had been in that city, in gaining a considerable *clientèle*. Dr. Beigel translated many standard English works and papers into German, amongst others Sims' 'Uterine Surgery,' and Hewitt's 'Diseases of Women,' and he was the author of a large work on 'Diseases of Women,' which he completed shortly before his death.

Laurence Martin, M.D., of the University of Melbourne, where he was also Lecturer on Obstetrics, and Physician to the Melbourne Lying-in Hospital, died at Cannes on the 19th of January, aged fifty-six. Dr. Martin was the leading accoucheur in Melbourne, having succeeded the late Dr. Tracy in his public appointments, and in most of his private practice. His career is one of the many examples in our profession of a successful struggle against adverse circumstances. He was educated in Dublin, where he qualified in 1851, and commenced practice in that city in a small way, with an open surgery, by which means he earned sufficient money to enable him to complete his education, and to take the Licence of the Edinburgh College of Physicians, which he obtained in 1853. Finding he was only able to earn a bare livelihood in Dublin, he determined to seek his fortunes in the colonies, and went to Australia in 1854, as surgeon to

an emigrant ship. He settled in Melbourne, and gradually worked his way until, on Dr. Tracy's retirement, he was elected to succeed him. He had long devoted himself specially to obstetrics, and in 1870 spent a year in Europe for the purpose of visiting the leading obstetric and gynæcological institutions. He was highly esteemed in Melbourne, and enjoyed much popularity from his genial nature and pleasant social qualities. Eventually, as in many a similar sad case, the constant strain of anxious work told on him, and about eighteen months before his death he showed signs of an obscure paralytic affection, which eventually proved fatal, in spite of a cessation from work, and a visit to Europe.

Dr. Charles James Campbell died in Paris, on the 23rd of June, aged fifty-nine. Dr. Campbell had only recently joined our Society, and his seeking our Fellowship at the close of a long and brilliantly successful career, when he had retired from the active practice of his profession, was, in itself, a compliment which we must all appreciate, and we may the more regret that death so soon severed his connection with us, since the work which occupied him at the time he was attacked with his fatal illness was an important paper which he destined for publication in our "Transactions." If immense practice, crowds of wealthy and influential patients from all countries, and an unblemished professional reputation be evidence sufficient of success, Dr. Campbell may, indeed, be said to have succeeded to the utmost of human ambition, for probably no modern obstetrician, unless it were Sir James Simpson, could compete with him in these respects. But Campbell was much more than a merely successful physician. I may be pardoned, since I had not the honour of his acquaintance, if I quote from the letter of an intimate professional friend of his, which will show far better than any words of mine, the kind of man whose loss we have to deplore. "Nothing," he writes, "can give any adequate idea of Dr. Campbell's exquisite kindness and charm of manner, the sweet winning smile of his face, and the sudden sympathy he inspired by his touching simplicity and modesty. Dr.

Campbell was one of the most prominent figures of his time, he enjoyed the favour of the Court under the Empire, he was the fashionable and most sought-after accoucheur, universally recognised as one of the heads of his profession. His success in practice, and his skilfulness as an obstetrician, were by-words in Paris, and yet, amidst all his prosperity and unrivalled success, he remained the kindest, the best, and the most simple of men. No one was more free from conceit and affectation; nobody was more straightforward and liberal in his dealings with his professional brethren. His devotedness to his friends was unbounded, and, in all his numberless acts of charity and kindness, he showed a delicacy and tact which added a thousandfold to his goodness." Dr. Campbell was of purely English extraction, having been born at Stapleton Park, in the county of York, but his parents went to France when he was six years old, and he was entirely educated in that country, having been a pupil at the College at Sens, and afterwards at the College Rollin in Paris, in both of which he greatly distinguished himself. Practically, therefore, by residence and education, he became French, although he was always proud of his nationality. After his medical studies were completed he became an Interne at the Paris Hospitals, and in 1846 was appointed Chef de Clinique under Dubois at the Maternité. Here he performed post-mortem Cæsarian section, as many residents at Lying-in hospitals have done before him, and it was characteristic of the man that he adopted the child he had saved, had him baptised with the name of "Cæsar Charles," and brought him up as his own son, until he died at the age of twelve years. Nor was this by any means his only act of kindness of the sort, for it is related of him that several of his patients asked him to be their intermediary in the reprehensible custom, which is not rare abroad, of putting their children out to nurse. More than one of these unnatural parents shortly ceased to defray the cost, and was never more heard of, and all the children so deserted Campbell himself took charge of, educated, and even provided for in his will. The starting point of Dr. Campbell's success was his early adop-

tion of anæsthesia in midwifery, on which he published a paper in 1849. This at once brought him a crowd of patients, and he was, unfortunately for science, too rapidly immersed in the busy life of a successful practitioner to admit of his paying the attention to literary work for which his talents undoubtedly fitted him. His views on this subject, popular as they were with his patients, were bitterly opposed by most of the leading French obstetricians, and involved him in controversy, from which he could never entirely free himself, and which, to a man of his temperament, must have been most distasteful. He did not again publish anything of importance until failing health forced him to retire from active practice, and in 1874 and 1877, he published memoirs, well worthy of reading from their valuable clinical experience, on "Obstetrical Anæsthesia." To us, on this side of the Channel, with whom the use of anæsthetics in midwifery is an everyday custom, the controversy Campbell's writings gave rise to is altogether inexplicable, and it is curious that, even to this day, anæsthesia in labour is adopted with comparative rarity in France, and its use is still objected to by many leaders of the profession. Campbell specially insisted on the fact, the value of which has been from the first recognised in this country, that obstetrical anæsthesia should never, except for a special purpose, be carried to the surgical degree, and that the administration should be with the pains only, and should be conducted so as to keep up a condition of semi-anæsthesia. He also laid particular stress on the value of the obstetrical effort in producing intermittent cerebral hyperæmia, thus rousing, to some extent the patient from a comatose condition, and materially contributing to her safety. If I might offer a criticism on his writings on these points, it would be that he under-estimated the tendency of long continued chloroform inhalation to induce relaxation of the uterus, thereby predisposing to post-partum hæmorrhage, a risk which I believe may be materially lessened by using a mixture of ether, chloroform, and absolute alcohol, instead of pure chloroform. Latterly Campbell was much interested in the study of puerperal

septicæmia, and forwarded some contributions on the subject to the Academy of Medicine, which, I believe, have not yet been published. During the Franco-Prussian war, Campbell resided in his country-house near St. Cloud, after all the neighbouring residents had left, and occupied himself so strenuously in the endeavour to prevent the pillage of the deserted houses, that he was arrested by the Prussians, and was on the point of being shot, when he fortunately was saved by the fact of the Prussian General before whom he was conducted being the husband of an old patient of his, to which happy accident he owed his escape, and also secured the safety of the houses in which he was interested. He took an active part in resisting the excesses of the Commune, his servant being shot by his side while he was engaged in attempting to extinguish a fire in a house in the Rue Royale. During the latter years of his life Dr. Campbell was compelled from ill-health to retire from practice. He died unmarried, after a comparatively short illness from peritonitis.

W. Tilbury Fox, M.D., must have been well known to most of us, and the profession at large feels his premature death as a heavy loss to medical science. Strictly speaking perhaps I should not include him in our list of deceased Fellows, since he had turned his attention to another branch of medicine, and had withdrawn from our Society. As, however, in his early years of professional life he devoted himself exclusively to obstetrics, and contributed largely to our 'Transactions,' I am sure I shall be pardoned if I speak of his loss as one in a great measure personal to ourselves. Dr. Fox was born in the year 1836, at Broughton, in Hampshire, where his father was a successful practitioner. He received his professional education at University College, of which institution he was a highly distinguished student. In 1857 he took the M.B. degree of the University of London, gaining the gold medal and scholarship in medicine. Shortly after he was appointed House Surgeon to the General Lying-in Hospital in the York Road, Lambeth. This, probably, determined him to adopt the obstetric branch of the profession, and he was subsequently appointed Physician-Accoucheur to the

Farringdon General Dispensary. He was elected a Fellow of the Society in 1860, and in the second volume of our 'Transactions' he published a lengthy paper on the "Pathological Lesions in Phlegmasia Dolens," which still remains one of the best of modern contributions to the study of the disease. Dr. Fox's object was to prove that the mere presence of coagula in the veins of the affected limb was not sufficient to account for the symptoms, and that the white, tense, and characteristic swelling was altogether different from œdema resulting from venous obstruction. He believed, and the assumption is far from unlikely, that in addition to venous thrombosis, obstruction of the lymphatics exists, which prevents the absorption of the effused serum. He also laid particular stress, and herein he was in accordance with the most modern authorities, on the influence of septic absorption originating in the uterus in the causation of the disease. Dr. Fox also contributed to the 'Transactions' a lengthy and valuable paper on "Puerperal Fever," based on statistics gathered from the records of the General Lying-in Hospital. It is interesting, as showing that his researches made him discard the idea of a peculiar specific fever to which lying-in women are subject, and he approached more nearly to the modern view of the subject, which identifies puerperal with other forms of septicæmia, than any writer of the day with whose work I am familiar. He also laid particular stress on the influence of perineal and other lesions of continuity in the genital tracts in affording ready channels for septic absorption, thus anticipating a point in the pathology of the disease which has been specially insisted on of late years. This brief record of the work Dr. Fox did in connection with our Society is sufficient to explain the regret with which many of his obstetric friends witnessed the transfer of his energies to other subjects. In 1863 he wrote his monograph "On Skin Diseases of Parasitic Origin," and in 1864 he published his "Treatise on Skin Diseases," a work which has run through four editions, has been translated into several foreign languages, and has obtained the position of a classic authority on the subject. At this time, also, he was

much engaged in journalism, being employed on the staff of the 'Lancet,' for which periodical he worked assiduously for many years. Of his career as a dermatologist this is not the place to speak. Suffice it to say that he was appointed Physician to the Skin Department at University College Hospital, that by his untiring energy he gained for himself a European reputation as an authority in his own subject, and that, at the time of his death, he had succeeded in establishing himself in a large and lucrative practice. He had suffered from rheumatism during a voyage in the East in 1864, and then probably originated the heart disease which subsequently proved fatal, and of the existence of which he was well aware. The knowledge that at any moment his life's work might be ended in no way daunted him, and to the last he maintained a bright and happy manner, labouring to do his work to the utmost of his power, while preparing himself for the end that he felt could not be far distant; doing, moreover, many an act of kindness to others in the most unaffected and unobtrusive way. It is strange how often we hear of such courageous battling with disease amongst prominent members of our profession, of which his friend Murchison, who died but a few weeks before him, may be mentioned as one example amongst many. I knew Dr. Fox well, and met him often, and nothing in his manner ever led me to suspect that he was aware of the state in which he was, although I understand that to those who were more intimate with him he often spoke of his illness. In June he went to Paris for a short respite from work, and on the morning of the 7th he was seized with an attack of angina. He knew that the end was come, bade farewell to his wife, and passed peacefully away, leaving behind him an honoured name, and an example of steady perseverance and uncomplaining resignation that teach a lesson which none of us need be ashamed to lay to heart.

Pye Henry Chavasse, F.R.C.S., died at Edgbaston, Birmingham, on the 21st of September, in his seventieth year. He was born at Cirencester, and received his medical education at University College. He became a member of the

College of Surgeons in 1833. He settled in Birmingham, and devoted himself specially to the diseases of women and children. He was best known to the profession through his popular works, entitled 'Advice to a Mother on the Management of her Children,' and 'Advice to a Wife on the Management of Herself.' Although the profession always looks with some suspicion on works of this type, there can be no doubt that they supplied a want, since the former has now reached its 13th, and the latter its 12th edition, most of these issues being made up of 20,000 copies each and they have, therefore, had an enormous, and probably unparalleled circulation. He also contributed several papers to the 'Lancet' and 'British Medical Journal' He was not officially connected with any of the public medical charities of Birmingham, but when the idea was mooted in 1872 of founding a hospital in that city for the diseases of women, he was one of its earliest and most enthusiastic supporters. Mr. Chavasse had retired from practice five years before his death.

Crosby Leonard, F.R.C.S. Edin., died at Clifton on the 31st of October, aged fifty-one years. He was born at Bristol in 1828, studied at Bristol, London, and Paris, and established himself in his native city, where he enjoyed a large consulting and family practice. In 1854 he was appointed Lecturer on Anatomy in the Bristol Medical School, an office he held until 1864, when he changed it for that of Lecturer on Surgery. From 1860 to 1874 he was Surgeon to the Bristol Infirmary. For some time before his death he suffered from an obscure form of paralysis, which compelled him to relinquish active work.

And now, gentlemen, there only remains for me the duty of offering to the Fellows and Office-bearers of the Society my grateful thanks for their patience and courtesy to me during the past year, and to express the hope that the coming one may equal, if not exceed, it in prosperity and progress.

Moved by Dr. GRAILY HEWITT, and seconded by Dr. GALABIN.

"That the best thanks of the meeting be given to the President, Dr. William Playfair, for his eloquent and able address, and that he be requested to allow it to be printed in the next volume of the Transactions."

Moved by Dr. POTTER, and seconded by Dr. CHAMPNEYS.

"That the Society desires its best thanks to be given to the retiring Secretary, Dr. John Williams, and the retiring Librarian, Dr. A. L. Galabin, for their zealous and valuable services to the Society during their terms of office."

MARCH 3RD, 1880.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—59 Fellows and 6 visitors.

Books were presented by Dr. W. R. Gillette, Professor Rizzoli, Dr. G. Eustache, Dr. Herman Roth, Dr. Hecker, the Royal College of Surgeons, and the Clinical Society.

The following gentlemen were admitted Fellows of the Society:—J. M. Biggs, M.R.C.S.; James Hill, M.D.; Walter A. Grogono, M.R.C.S.; and Denis Sidney Downes, L.K.Q.C.P.I. And the following were declared admitted:—Alex. F. Churchill, M.B. (Aldershot); George H. Cowan, M.B. (Ontario); Charles Orton, M.R.C.P. Ed. (Newcastle-under-Lyme); and G. P. M. Woodward, M.D. (Puckeridge, Herts).

The following gentlemen were elected Fellows:—Francis J. Bailey, M.R.C.S. (Liverpool); Rt. Crewdson Benington (East Dulwich); Robert Bruce, junr., M.R.C.S.; John Blount Fry, M.R.C.S. (Swindon); Thomas Hamilton, M.D., C.M.; John Oakley, M.R.C.S. (Halifax, Yorkshire); and Fred. E. Pocock, M.D.

Dr. GODSON showed a double monster which had been presented to him by Dr. Yarrow. He had asked Mr. Eve, the Curator of the Museum of St. Bartholomew's Hospital, to dissect it with a view to ascertain its anatomy, and the following was the result of his examination. The formation of the heart was particularly remarkable.

DESCRIPTION OF A DOUBLE-HEADED HUMAN FEMALE MONSTER BORN AT THE FULL TERM OF GESTATION.

By F. S. Eve, F.R.C.S.,
CURATOR OF THE MUSEUM, ST. BARTHOLOMEW'S HOSPITAL.

It presents the condition described by Förster[1] as dicephalus dibrachius dianchenos, and by Gurlt[2] as dicephalus bispinalis. The heads are well developed. The spinal columns converge, but are distinct throughout, and there are two well-developed sacra, placed side by side. The pelvis is completed by an os innominatum of the ordinary size on either side; there is no trace of a mesial lower extremity.

The mesial upper extremity is represented by a double fused scapula, having a median spine and single glenoid cavity, which is overhung by two arched acromia. A double fused clavicle articulates with the glenoid cavity, and in front it was connected with the sternum. The scapula was connected to the spines by a trapezius and rhomboidei muscles. Before dissection it produced a prominent hump at the upper part of the back between the two fœtuses.

There is a large common thoracic cavity, bounded in front by a single sternum, to which the clavicles and ribs were connected in the usual manner. On the posterior wall of the cavity the interval between the converging spinal columns is filled in by single rib-like bones, articulated to the vertebræ on either side.

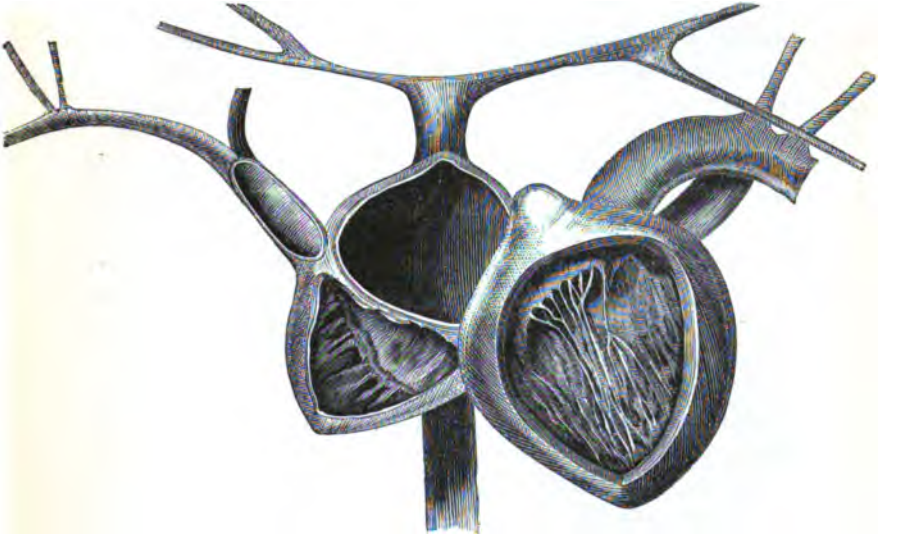
The right half of the diaphragm is deficient, and the corresponding thoracic cavity contains the right stomach, pancreas, spleen, a portion of the liver, and all the small intestines.

Organs of circulation.—The hearts are fused; that on the

[1] 'Missbildungen des Menschen,' p. 23.
[2] 'Ueber Thiersche Missgeburten.'

left side is nearly normal, but the development of the right heart has been arrested.

Two large systemic veins, corresponding to the superior and inferior venæ cavæ, empty themselves into an extremely large auricular cavity common to both hearts. The common auricle communicates by an opening, inferior and to the left, with the right ventricle of the left heart; the auriculo-ventricular opening is only provided with one large anterior valve, otherwise the left heart is in every particular normal. The left auricle, which receives only the blood from the left pair of lungs, is separated from the common auricle by a thin perforated septum.



The right heart, attached to the right side of the left, consists solely of a single small ventricle, with a muscular tube resembling a *bulbus aortæ*, leading from it. The ventricle communicates by a large opening, having only one valve, with the common auricle described above. There is an indication of a ventricular septum in the form of a muscular partition, which projects slightly forward from the wall of the ventricular cavity.

The ventricle communicates above by two small openings with a muscular tube about half an inch long and about the size of a slate pencil. The openings are of unequal size, placed side by side, and are unprovided with valves.

The muscular tube passes upwards and to the right, and gives off the aorta and pulmonary arteries side by side; both arteries are provided with valves.

Near the middle of the posterior surface of the tube three parallel folds are seen, which appear to be indications of valves.

It will be observed from the above description that the right heart presents an extraordinary resemblance to that of the fishes (except Amphioxus). The single auricle and ventricle, the muscular tube, which may be considered the analogue of the *bulbus aortæ*, and further, the indications of additional valves, such as are found in the aortic bulbs of ganoid and elasmobranch fishes, render the simulation well-nigh complete.

Blood-vessels.—The arrangement of the pulmonary artery and of the aorta and its branches is perfectly normal on the left side.

On the right side the aorta curves to the right, and after giving off the two carotids and the right subclavian passes downwards to join the left aorta, thus forming a common aortic trunk.

The ductus arteriosus on the right side is an extremely small vessel, which is given off from the concavity of the aortic arch, nearly opposite to the right carotid.

No trace of a left subclavian passing to the mesial upper extremity existed.

Respiratory organs.—There are two pairs of contracted lungs, one on either side of each spinal column; they were not contained in distinct pleural cavities.

Alimentary canal.—There are two distinct alimentary canals, with their associated organs, as far as the duodena, which unite to form a common small and large intestine.

The right stomach, with the spleen and pancreas attached to it, lay in the right pleural cavity, as before mentioned.

The left stomach, spleen, and pancreas occupy the usual position beneath the diaphragm. The duodena converge and unite beneath the liver, where the single common bile-duct joins them.

The livers are fused, but the smaller portion comprising the right half is attached to the remainder only by a thin band of liver substance; it occupies the right pleural cavity, as before noted.

Two small pedunculated additional lobes attached to the left half of the liver pass upwards behind the diaphragm into the thoracic cavity.

The fundus of the gall-bladder is bifid.

The genito-urinary organs are well developed and not reduplicated.

Nervous system.—There were two distinct and perfect spinal cords, giving off nerves on either side.

Remarks.—This form of monstrosity does not appear to be of extremely rare occurrence. In the Teratological Series of the Royal College of Surgeons there is a similar specimen, specimen 119, but in this the hearts are distinct.

I have been unable to find in the works of Geoffroy St. Hilaire,[1] Förster,[2] or Gurlt,[3] a record of a monster with fused hearts presenting the peculiarities of that described. Förster,[4] however, figures a specimen of Thoracopagus with fused hearts, in which each heart possessed but one auricle. He and St. Hilaire both state that this dicephalus form of monstrosity is viable, and the latter mentions[5] one, exhibited in Paris, which lived over eight months.

It would, I think, have been impossible for the fœtus described to have breathed, since the right pair of lungs would have been prevented from expanding by the abdominal viscera, which occupied the right side of the thorax.

[1] 'Anomalies de l'organisation Monstruosité.'

[2] Op. cit.

[3] Op. cit.

[4] Op. cit., plate vii.

[5] Tom. iii, p. 161.

Dr. YARROW said, I was called to this case by a midwife attached to the City of London Lying-in Hospital on January 27th at 1 a.m. The reason for sending for me was that the labour having progressed favorably to 10 p.m. 26th, the pains began to cease and from 10.30 p.m. had not recurred. Upon examination I found a head presenting in the first position and tolerably low down in the pelvis. The os was fully dilated, and there was ample space. Several doses of Liquor Ergotæ had been given by the midwife. I therefore at once applied the forceps, and with some difficulty brought the head through the vulva, but further progress was arrested. Having removed the forceps I passed my finger into the hollow of the sacrum and brought down the right arm. I next introduced my finger in search of the left arm, but it came in contact with what appeared to me to be a large tumour, springing from the left shoulder. I was unable to pass my finger very far, as the outlet was occupied by the head and neck already mentioned. I passed in a vectis, and by its aid as a lever, and a considerable amount of pulling, I brought down the second larger head and left arm; the remainder of the body followed easily. The force used lacerated the tissues between the heads, caused considerable hæmorrhage, and no doubt death of the fœtus. There was a single medium-sized placenta. The woman complained of a forcing pain in the rectum, which passed off in a few days, and she made a satisfactory recovery. She was a well-developed woman, thirty-two years of age. This was her seventh pregnancy, all the others having been perfectly natural.

Mr. EVE said that he thought the arrest of development of the right heart was due entirely to mechanical causes, viz. *to tension*. The fused hearts occupied a position considerably to the left of the mesial line, so that the left heart was in its normal position as regards the left head, but the right heart was much further removed than usual from the right head. The distance, therefore, which the right heart would have to traverse from the point immediately beneath the head fold (where its rudiment first appears) to its present position would be much greater on the right than on the left side. In the descent of the heart, and the growth forwards of the head of the embryo, an abnormal amount of tension on the primitive heart-tube was probably produced, which would be likely to interfere with the normal folding of the tube upon itself, and thus prevent its development beyond the simple condition found. The venous end of the tube remains fused with the other heart, forming a common auricular cavity, the middle portion forms the single small ventricle, whilst the upper end, which should have been brought down, remains as a muscular tube resembling the bulbus aortæ of fishes. The external length of the ductus arteriosus on the right side adds strong evidence to this theory.

PELVIC VISCERA.

Mr. Alban Doran exhibited two specimens of pelvic viscera, showing congenital communication between the rectum and the genito-urinary tract. The first had recently been presented to the Museum of the Royal College of Surgeons, by Mr. Boyton of Watlington, Oxon. It is from a male infant, who during lifetime passed meconium by the urethra, the anus being completely absent. Soon after birth an exploratory incision was made, but the rectum could not be reached, and the operation-wound was allowed to close up. When six months old the child died from some visceral disorder, and the parts here exhibited were removed. On dissection the rectum was found dilated and its muscular coat much hypertrophied. A sphincter surrounds it immediately above the point where it opens into the urethra just below the sinus pocularis, which is very large and well-marked. The channel of communication passes through the prostate and readily admits a No. 4 bougie. The ureters are dilated, the walls of the bladder hypertrophied. The urethra measures two inches and three quarters when laid out straight; it is much dilated, especially in its prostatic and membranous portions. The penis is enlarged, and complete phymosis exists without any adhesion of the prepuce to the glans. The vesiculæ seminales appear normal; the vasa deferentia were cut away in removing the parts from the body.

The second specimen, also added to the Teratological Series in the College Museum, was taken from a girl eleven years old. Fourteen days after her birth fæces were seen to pass through the vagina, and soon much discharge and sloughing is said to have taken place, but no trace of any pathological loss of substance remains. For over ten years she was subject to great discomfort from the malformation, and in autumn, 1879, she was admitted into the Samaritan

Hospital, under the care of Dr. Wynn Williams who detected a mass of fæces obstructing a common cloaca; the anus was completely absent. The accumulation was cleared out by a wooden spoon and the cloaca kept clear by injections for nine days, when it again became impacted with fæcal matter. An injection was thrown into the cloaca by a nurse, the patient remaining in a standing posture during its application, when suddenly she complained of great pain, with a feeling as though something had given way. Symptoms of pelvic cellulitis set in, bed-sores formed, and she died a fortnight later. On post-mortem examination pus was found in the cellular tissue of the left side of the pelvis, extending upwards into the left iliac fossa and the areolar tissue of the abdomen behind the peritoneum as far as the diaphragm. The peritoneum was in no part inflamed, but the presence of pus between the muscular fibres and peritoneal lining of the diaphragm had excited pyæmic changes in the adjacent left lung. There was a small hole on the left side of the vagina, which admitted pus from the pelvic cellular tissue. I removed the pelvic viscera entire, with the symphysis pubis and part of the pubic arch.

The external organs are perfectly normal. The vagina and rectum both open into the vulva; they are separated by a septum, which ends below in a sharp border, nearly half an inch from the nymphæ. The orifice of the rectum is half an inch in diameter and rather wider than the aperture of the vagina. The urethra opens normally into the vestibule, on a plane much lower than the free border of the septum, between the vagina and rectum. The lower part of the rectum is much dilated and its muscular coat hypertrophied; the sphincter externus is well marked, though it was very inefficient. The vagina is curved, and measures nearly two inches in length, by half an inch in breadth. There is no vaginal portion of the cervix uteri, but the os externum, though minute, admits a stout bristle into the uterine cavity. The uterus measures one inch and an eighth in length, its fundus is half an inch wide; it is thin and flattened, but the ovaries are well-developed, and each nearly an inch and a half

long. I could find no other deformity of any kind in this patient's body.

These specimens are absolutely homologous from a morphological point of view. Professor Morisson Watson and others have shown how the verumontanum and sinus pocularis represent both uterus and vagina. In the specimen from a male infant the rectum opens through the prostate immediately below the sinus pocularis. Suppose the verumontanum in this specimen to be pushed behind the bladder as a uterus and vagina, carrying with it the rectum, then we have precisely the condition seen in the second specimen. This latter example of the rectum and vagina opening together in a human subject is by no means a literal imitation of the arrangement of the pelvic viscera in the *Ornithorhynchus* and in reptiles, for in these animals the ureters open directly into the cloaca below the bladder; still less does it resemble the disposition of the same parts in birds where no bladder exists at all. No such a thing as a "monotrematous" woman has ever existed in the precise zoological signification of the term. The bladder, urethra and ureters are all normal in this specimen.

In both, the monstrosity is entirely dependent on the failure of development of the septum between the rectum and the genito-urinary tract, possibly determined by the absence of any involution of integument for the formation of the anus, since atresia ani is equally conspicuous in the male and female example. No better terms can be applied to them than those already used by Passendorp, Förster, and Klob, namely "Atresia ani urethralis" and "Atresia ani vaginalis." As for operative interference the first specimen shows its difficulties, the second its dangers. A very successful case of operation for the cure of atresia ani urethralis, by Mr. Savory, is given in the 'Lancet,' January 3rd, 1863. Signor Rizzoli's operation for forming an anus in cases of atresia ani vaginalis is well known, being illustrated by figures in 'Holmes's System of Surgery,' vol. v. In the case here exhibited it would have been probably impracticable, there being hardly any space between the vulva and coccyx.

Dr. ROGERS said it was impossible for any one who had not seen the patient and examined her to judge correctly how impracticable it was to form anything like a proper rectum apart and separated from the vagina; from the manner and length of time the vagina had been distended by fæces, the vagina had become a cloaca, filling the pelvis. The entrance from the rectum into it was high up, and it was thought impossible by all who carefully examined the parts during the patient's life to obtain tissue to form a rectum, and while trying to keep the vagina free from fæcal accumulation the mischief occurred which caused her death.

ANTEFLEXED UTERUS.

DR. HAYES showed a specimen of anteflexed uterus. It had been found at the post mortem, and he could furnish no uterine clinical history, except that the woman, age 57, had never been pregnant. The fundus and body of uterus are arched downwards and forwards, almost touching bladder. Two or more narrow, loose adhesive bands extend from bladder to each anterior border of uterus above internal os. The intravaginal portion of cervix has almost disappeared; the os small, circular (pin-hole), opening into top of vagina. On making longitudinal section through posterior wall there is seen in it, just above internal os, a fibroid tumour, size of a hazel nut, which closely approaches uterine cavity. On anterior wall of cervix there is a sessile mucous polypus, size of small raisin, and above it a Nabothian ovule. Length of uterine cavity 2½ in. Breadth at fundus 1¾ in. The cervical cavity is dilated and spindle shaped. The flexion, which properly speaking is more of an arching than a flexion, exists just above internal os, below the site of fibroid tumour.

Report of Sub-Committee upon the Specimen shown by Dr. Godson for Mr. Kingston Barton.

THE specimen consists of the uterus with the Fallopian tubes and ovaries. The uterus is not enlarged, it measures

3 inches from fundus to lowest part of cervix, and the cavity measures $2\frac{1}{2}$ inches. The outer surface is healthy, the inner surface of the body presents a shreddy appearance, the decidua is absent almost entirely. The right ovary contains a large corpus luteum, measuring $\frac{3}{4}$ by $\frac{1}{2}$ by $\frac{1}{2}$ inch. In the outer half of the left Fallopian tube is a swelling measuring about 1 by $\frac{3}{4}$ by $\frac{3}{4}$ inch, containing a large clot of blood. The wall of this cyst is formed by the dilated portion of the tube, is thin, and has at one spot given way. In the centre of the clot is a small cavity measuring $\frac{3}{8}$ inch in its longest diameter, lined by a thin membrane. This had been opened at the time the specimen was shown, so that its contents had disappeared.

Sections have been made, including the wall of the Fallopian tube, and the clot in continuity with it, near the attached border of the tube, and also near the point of rupture. The latter sections include also the membrane which lines the small cavity in the clot. The thickness of the tube wall, near its attached border, varies from $\frac{1}{40}$th to $\frac{1}{8}$th inch; near the point of rupture it is only about $\frac{1}{30}$th inch. At several points of the inner surface of the tube is seen a layer of very large cells, round or elongated, which in size and shape resemble the cells of the uterine decidua of early pregnancy. The rounded cells are, on an avarage, about $\frac{1}{900}$th inch in diameter, and the elongated cells often $\frac{1}{400}$th inch or more in length. A few sections of villi are seen near the inner surface. They consist of embryonic cellular tissue, with an epithelial covering, but do not show any considerable vessels. At one or two points the mode of attachment of the villus to the maternal tissue appears to be shown, and to resemble that which is found in the uterus. The villus has lost its epithelium on the side adjoining the tube wall, and its cells are in direct continuity with the maternal embryonic cells. Close to the inner surface of the tube some large vascular spaces are seen surrounded by the large embryonic cells. No epithelial covering is visible, for the most part, on the inner surface of the dilated tube, but, at one point, a branching glandular cavity is seen, running for some distance between the layers

of the tube wall. It is lined with cylindrical epithelium proliferating irregularly.

The membrane lining the small cavity in the clot is about $\frac{1}{100}$th inch in thickness. It consists of embryonic cellular tissue, having an epithelial covering externally, and is seen, on section, to be in continuity with some of the villi. It is therefore evidently the chorion.

The corpus luteum in the right ovary is $\frac{3}{4}$ inch in its greatest diameter. A microscopic section shows it to consist mainly of round cells, whose average diameter is about $\frac{1}{1000}$th inch. It contains a stellate cicatrix of fibroid tissue, but no remnant of blood-corpuscles is seen in it. It appears therefore to correspond to the corpus luteum of pregnancy, and to be probably at least two or three weeks old.

The microscopic characters prove that Fallopian gestation existed, but no trace of the embryo has been found. The clot appears to be situated mainly amongst the villi, which are scanty in number, but it is seen to have been partially effused also in the substance of the tube wall, near the inner surface. From the small size of the chorionic cavity, we should conclude that the embryo could not have reached more than one month's development.

JOHN WILLIAMS.
CLEMENT GODSON.
ALFRED L. GALABIN.

Dr. GALABIN showed microscopical sections of the specimen, including the chorion and villi, and also the giant embryonic cells growing from the tube wall.

FŒTAL HEAD.

Dr. ROPER exhibited the cast of a fœtal head, showing the furrowing in the left temporal region caused by pressure against the promontory of the sacrum in delivery through a narrow conjugate. This was the mother's third child. In

her first labour she had been delivered, with much difficulty by forceps, of a still-born child, the hand having come down beside the head. In her second labour with head presentation I tried to deliver with forceps and failed, and afterwards effected podalic version, but could not extract the head, and was obliged to have recourse to cephalotripsy. In her third labour the funis and hand prolapsed by the side of the head. I tried to deliver by podalic version, but no amount of traction that I could fairly use succeeded in getting the head through the narrow conjugate. I waited the arrival of Dr. Herman to assist me and give chloroform preparatory to performing cephalotripsy; but before his arrival she had six or eight severe pains, and the head was expelled naturally. Attention has been called to these furrows (and at times actual fractures of the cranium) by Dr. Goodell in an interesting and excellent paper, "On the Mechanism of Natural and Artificial Labour in Narrow Pelves," published in the 'Transactions of the International Medical Congress,' September, 1876. The bi-temporal measurement of this head, through the point of depression, is 3$\frac{1}{8}$th inch. After delivery, measurement of the pelvic conjugate, by means of the open hand passed up through the brim, was ascertained to be just about 3 inches.

MALIGNANT DISEASE OF THE CERVIX UTERI.

Dr. Roper exhibited a specimen of malignant disease of the cervix uteri. The patient, æt. 30, had borne one child eight years ago and during the last six months had had almost continuous hæmorrhage. Her health was much impaired and she was much wasted. On examination per vaginam there was a large bulbous excrescence of disease at the point of the cervix, and above there seemed at first to be a healthy state of its structure; but on passing the finger into the posterior vaginal pouch, a streak of indurated tissue could be traced up to the body of the uterus; but for this it looked

like a case suitable for surgical removal. After having been in the Royal Infirmary four or five days she was seized suddenly with intense abdominal pain which threw her into a state of collapse; but she lived on for four days. After death there was evidence of severe and universal recent peritonitis. The left ovary is seen to be bound to the posterior surface of the uterus by old adhesions. Both ovaries contain recent blood clots. The entire length of the cervical canal is in a state of malignant ulceration.

ON AXIAL ROTATION OF OVARIAN TUMOURS, LEADING TO THEIR STRANGULATION AND GANGRENE. THREE CASES SUCCESSFULLY TREATED BY IMMEDIATE OVARIOTOMY.

By Lawson Tait, F.R.C.S.

This remarkable incident in the life-history of ovarian tumours is one which has not yet received as much attention as either its importance or its frequency deserves, and, so far as I know, no very reasonable explanation of the method of its occurrence has been given.

So far as I can find, the first notice of the incident is made by the same author who has written most about it, Hofrath Professor Carl Rokitansky, who describes it in his 'Handbuch der Pathologischen Anatomie' (vol. i) in 1841. There the description is not full, but it is certain that he had then seen it, and in his future papers he tells more about it than does any other author; indeed, most other writers have taken their descriptions from him with more or less acknowledgment.

I have found a note of a paper by him in the 'Allgemeine Wien Medizinische Zeitschrift' for 1840, but have not been able to find the original. Possibly the note in question is a misprint, though the title is given in full,

"Ueber Abschnerung der Tuben und Ovarien und ueber Strangulation der Letzeren durch Achsendrehung." The note in question is in 'L'Histoire des Kystes de l'Ovaire," by Dr. Louis Gallez, a book otherwise notable for its inaccuracies. Dr. Rokitansky has also written very full papers in the 'Allgemeine Wiener Medizinische Zeitung,' 1860; in the 'Zeitschrift der K. K. Gesellschaft der Arzte in Wien,' 1865; 'Ueber der Strangulation von Ovarialtumoren durch Achsendrehung.' Dr. Gallez quotes as a case of this kind one published in the 'Lancet' of 1845 by Mr. Robert Hardy, Surgeon to the Lying-in Charity at Hull, but it is one of death from constricted intestine and rupture of a dermoid cyst, not a word being said about twisting of the pedicle in the original paper.

Dr. Van Buren narrates two cases in which he noticed the twisting of the pedicle of an ovarian tumour, in the 'New York Journal of Medicine,' 1850 and 1851.

In the first the tumour was on the left side, but the direction of the twist is not given. The twist had not strangulated the tumour, and did not hasten the ovariotomy, which was successful.

The second case was one in which acute peritonitis was diagnosed on August 28th, and the patient died on September 8th. On post-mortem examination the tumour was found very dark in colour, almost black. It was a tumour of the right ovary, but the direction of the twist is not stated. "The twisting of the pedicle interrupted entirely the circulation, the tumour thus became engorged with blood, thence peritonitis, followed by enteritis, causing death." The tumour had made one and a half revolutions only, the pedicle being short.

Dr. Patruban ('Oesterreiches Zeitschrift für practische Heilkunde,' 1855) publishes a case where the torsion produced rapidly fatal intracystic hæmorrhage.

Dr. Crome, of Brooklyn ('American Medical Monthly,' 1861), had a case where the strangulation occurred twenty-four hours before labour in a small tumour, the patient dying of peritonitis on the fifth day. The accident was

indicated by the access of agonising pain in the left side. The cyst was found ruptured and in a state of gangrene.

In the 'Transactions of the Pathological Society' for 1868, Dr. Alfred Wiltshire records a most important case, which seems to be the first in which any one was bold enough to operate in the presence of, and on account of, acute symptoms. The case was one of strangulation and gangrene due to rotation, with consequent peritonitis.

The operation was performed in May, 1868. Rapid increase of the tumour had taken place, and there were symptoms of the most urgent kind present. Vomiting had been incessant for three days, when, after unusual exertion, rapid enlargement of the tumour had begun. The pulse was quick and feeble, the extremities blue, and the patient's general condition one of collapse.

The extreme tension of the abdominal parietes was shown by the way in which the tumour shot up into the wound directly the incision reached the peritoneal cavity; it also rotated. Blood escaped on puncture, and at one place the cyst wall gave way when touched owing to extreme thinness. The pedicle was rotten, and the *right* cornua of the uterus had to be transfixed and tied to arrest hæmorrhage.

The tumour proved to be of the right ovary and multilocular, the loculi being distended with blood. It had rotated on its pedicle four days before the operation, strangulation ensuing. The twist was from right to left, and appeared to have given two turns. The pedicle was quite small and short.

I think sufficient praise can hardly be given to Dr. Wiltshire for his courage in performing the operation under such urgent conditions, and it is not too much to say that to his success in this case we owe a new departure in the practice of abdominal surgery by which operations under acute symptoms are undertaken, and, apparently, with results as satisfactory as those obtained in cases free from emergency.

In his book on 'Diseases of the Ovaries,' Mr. Spencer Wells mentions that, during his first 500 cases, he found the

pedicle twisted in about twelve cases, but no mention is made of any of the tumours being consequently gangrenous, or that the operation was thereby hastened.

Dr. St. John Edwards, of Malta, has published a case in the 'Lancet' of October, 1861, in which he had recognised an ovarian tumour during the lady's first pregnancy. Her second labour occurred prematurely, sudden abdominal pain occurred on the second day after, and she died on the fourth. The tumour was found to be of a livid purple colour, with patches of extravasated blood, and rents in its walls. The right ovary was flattened out on its under aspect (so that it must have been a parovarian cyst). The pedicle was two inches long, and had been twisted once and a half times round. It was intensely congested, and the ovary was full of dark extravasated blood (closely resembling one of my own cases). There was no peritonitis, and the tumour was absolutely free from adhesions. The contents of the sac were claret-like. He attributes the twisting to the expulsive action of the uterus, though the accession of pain was not till about forty-eight hours after labour.

In the 'Edinburgh Medical Journal' I published the following case, which I desire to reproduce here, as it was the first of my experience of this remarkable accident:

On August 18th I was called in consultation by my friend, Mr. Lorraine, of Wakefield, to see Mrs. C—, æt. 48, who was suffering from a strangulated femoral hernia. I found the tumour of small size, that the symptoms had existed only two days, and that it was irreducible by the taxis under chloroform. I suggested a full dose of belladonna and a delay of six hours. At the end of that period I again tried the taxis under chloroform, but without being able to reduce the hernia, so I at once performed Gay's operation, divided Gimbernat's ligament freely, and without any trouble succeeded in returning the bowel.

At 7.30 on the morning of the 19th she was much relieved, free from pain, and the vomiting had quite ceased. Opium was administered freely, and iced brandy-and-water or Moselle *ad libitum*.

20th, 8 a.m.—The abdomen was slightly tympanitic, and the pulse about 140, the patient being free from pain and sickness. 8 p.m. Tympanitis increased; ordered a turpentine stupe.

21st, 8 a.m.—Tympanitis so extreme that I entertained the idea of puncturing the intestines. Temperature in axilla 101·6°; no pain or sickness, and she takes beef tea and stimulants freely; face very anxious in expression. 10 p.m. Mr. Lorraine had seen her in the afternoon, and reported that she was somewhat better. When we met we found that the distension was much less; there was no pain and no narcotism, as the opium had been intermitted; rectum examined per vaginam, and found quite empty; temperature in axilla 101°.

22nd.—In the forenoon she had two moderately-sized and very offensive stools; in the afternoon she was seen by my friend, Mr. Kemp (in whose practice the case occurred), who noticed, and remarked to me afterwards, that the breath had the hay odour. At 10 p.m. I saw her with Mr. Lorraine, and we both noticed the musty smell of the breath. She was sinking then, and died at 8 a.m. on the morning of the 23rd.

Twelve hours after death I made a post-mortem examination, with the kind assistance of Mr. Lorraine and Mr. J. Kemp. The wound made to relieve the strangulation had healed by first intention. On opening the abdomen I found the small intestines much distended with flatus. The sac of the hernia was empty and uninjured. On separating the intestines a black gangrenous mass was observed lying in the concavity of the right ilium. On passing my hand round it I discovered that it was a small ovarian tumour, consisting of two equal-sized cysts, one of which was totally gangrenous, and so soft as to break up with the most gentle handling, and discharge into the cavity a quantity of dark fœtid serum; the other cyst was partially gangrenous. The tumour measured about 11 inches long, and 4 inches in its greatest diameter, and it had a constriction between the two cysts. Its base was slightly glued to the brim of the

pelvis; but, with this exception, there was no peritonitis. The tumour lay across the transverse diameter of the pelvis, the left end being buried in the pelvis, while the right lay over the brim on to the ilium. It was the right hand cyst which was totally gangrenous.

When I passed my hand down the pedicle I found that it was long and thin, and twisted on itself, feeling more like an injected umbilical cord than anything else with which I am acquainted.

I remarked to my colleagues that the pedicle was twisted, and, keeping it in my left hand, with my right I slowly untwisted it, by rotating the tumour until the pedicle was straight. To do this, I had to alter my grasp of the tumour nine times; that is, the pedicle had been twisted by four and a half revolutions of the tumour. It was the right ovary which was diseased (and the twisting was from within outwards towards the right side, as far as my recollection now serves me).

Concerning this case, I have ever since had a suspicion that my operation for hernia was an unnecessary one, and that all the symptoms were really due to the gangrenous tumour. If this were really so, I have the consolation that I did my patient no harm.

When this case occurred to me I had never heard of the accident, indeed, it occurred nearly twelve years ago, and my experience of ovarian tumours was somewhat more limited than it is now. The case, however, made a deep impression on me, and I resolved if ever I met with such symptoms in another woman, and could discover the presence of a tumour, I should not hesitate to attempt its removal. This determination I have been able to carry into effect on three occasions with perfectly successful results. Of course, I cannot but regret that I did not recognise the existence of this tumour when I had the patient under chloroform, as I think I could do now with my larger experience in abdominal surgery, though perhaps my youth and inexperience at the time form a barely sufficient apology.

The next case I find on record is one published by Dr.

Barnes in 'St. Thomas's Hospital Reports' for 1870, where Mr. Spencer Wells, Dr. Tyler Smith, and Dr. Oldham had all recognised the presence of an ovarian tumour. Dr. Barnes saw her on August 26th, and on September 2nd, when the diagnosis of pregnancy, in addition, was made. On the 25th there were all the indications of mischief in the cyst, and Dr. Barnes discussed the question, "Has the extra-uterine cyst ruptured?" On that day a premature fœtus was expelled, and she lingered on till October 4th without any attempt at surgical interference.

At the post mortem "a cyst came into view, dark coloured, stained with blood in several points, having extravasated blood clotted in its walls. In places it was found very fragile; it had twisted twice axially from right to left during life."

I do not think there can be a doubt that if this case had been operated upon, as it might have been, seeing the tumour had been recognised, the patient would have recovered.

A still more curious case is related by Dr. Barnes in the same paper, where the symptoms of strangulation were taken for those of labour, and where, on post-mortem examination, he says he found an ovarian tumour entirely free from adhesions, with its pedicle twisted twice into a rope, the appearances of gangrene being conclusive. Such a case would be just such a one in which ovariotomy would be, and has been in my hands, successful.

Mr. Knowsley Thornton ('Pathological Transactions,' November 2nd, 1875) has published a case in which the patient was four and a half months pregnant, and in which one cyst of the tumour was emptied by tapping, ten pints of fluid being removed.

On the seventh day after the tapping, the sudden and extreme pain in the abdomen, which always characterises these cases, came on. Ovariotomy was performed next day, and the tumour was found partly gangrenous, this being due to the twisting of the pedicle through three revolutions, and consequent strangulation. The patient survived only a few hours. The tumour still contained one large cyst, having

four and a half pints of fluid in it. The whole substance of the tumour was infiltrated with blood.

Mr. Thornton thinks the strangulation may have been begun after the tapping, and this, I think, is unquestionably correct, otherwise it would be impossible to account for the advanced condition of gangrene in which the tumour was found. That could hardly have occurred during the very few hours which elapsed between the occurrence of the violent pain and the performance of the ovariotomy. I think it very probable that the cyst that remained after the tapping was the source of the accident, the point upon which was exercised the leverage, whatever that be, which turned the tumour round. Mr. Thornton thinks that this leverage may have been the movements of the fœtus. With this I can hardly agree, for, in the first place, whilst rotation of ovarian tumours is, to quote Rokitansky, by no means a rare occurrence—at least between thirty and forty cases having been observed—the association of the accident with pregnancy is noted in six only; and bearing in mind the thickness of the uterine wall, the quantity of liquor amnii, and the feebleness of the movements of a fœtus at the eighteenth week of gestation, I do not see how the fœtal movements could exercise movements of such force and *constancy of direction* as to turn a large ovarian tumour through three complete revolutions.

Dr. Malins ('Lancet,' April 14th, 1877) relates a case in which a tumour, diagnosed as unilocular, gave rise to a series of symptoms, amongst which were abdominal pain, sickness, loss of appetite, emaciation, temperature 101°, and pulse 130. Two days afterwards he tapped her, this being followed by great relief, and on the 15th he removed the cyst, which was found to be in a condition of incipient gangrene, due to twisting of the pedicle for two complete turns. Between the tapping and the removal of the tumour the patient's symptoms seem to have been quite relieved, and we may therefore conclude that the tapping relieved the tension, and thereby arrested the progress of the gangrene already due to the twisting. Dr. Malins heads the narration of the case

"On Tapping as a cause of Rotation of the Pedicle in Ovarian Tumours," but the history given does not justify the title. Whether the cyst was ovarian or parovarian is not stated, but it most probably was the latter, and the mechanism of the rotation was certainly that to which all such movements are due, the history being in no way different from the run of such cases.

At a meeting of the Dublin Pathological Society, December 4th, 1879, Dr. Kidd showed the preparation from a woman whom he had had under his care in the Coombe Hospital, and who had died under circumstances which clearly pointed to something wrong in a tumour which had been recognised some months before. The preparation was that of an uncomplicated ovarian tumour, with twisted pedicle and consequent gangrene. "There was a complete turn upon the pedicle; this had strangulated the tumour, and thus gave rise to the black appearance, and the woman died from irritative fever, produced by strangulation and sphacelation of the morbid growth." This is another case where I think there is cause for regret that an attempt at removing the tumour was not made. From the experience I am about to give of my own practice, I think there can be little doubt that the rule will be established that if the existence of an ovarian tumour has been, or can be, recognised, and symptoms should set in which are of a serious kind, and can be referred to strangulation of that tumour, an exploratory incision should be made, and the tumour removed if possible, especially if it be found to be the seat of the mischief.

During last year I had the remarkable occurrence in my practice of three cases of gangrene of ovarian or parovarian tumours, due to axial rotation.

The first case was sent to me by Dr. Faussett, of Tamworth. She was forty-six years of age, her last confinement was four years ago, and her menstruation was normal. I saw her first in March last on account of a small tumour, which I diagnosed to be monocystic, and probably parovarian. I advised her to defer any operation till it was

larger. She returned on June 9th with the tumour greatly enlarged, and suffering from intense abdominal pain. Her face had a peculiar anxious expression, and her temperature rose to 39° C. at night. I therefore recommended the immediate removal of the tumour. On opening the abdomen I found the cyst of a black pearly colour, universally adherent by recent lymph, its contents quite black, and its walls black, gangrenous, and in places quite rotten. The pedicle was twisted three or four times, and at the point of maximum constriction it was only as thick as an artist's pencil. I tied it just below this point. After the operation she had no pain, the temperature never rose above 37° C., and she has made an uninterrupted recovery. The right ovary was involved in the gangrene, but it was free from the tumour. The rotation had occurred from within outwards to the right. The operation was performed without any of the Listerian antiseptic precautions.

The second case occurred in a patient from Sheffield, placed under my care by my colleague Dr. Edginton. She was thirty years of age, had been married ten years, but never had been pregnant.

She had noticed a gradual increase in size for nine months previous to my seeing her. Sudden and violent pain in the abdomen occurred on the 4th of November, followed by incessant sickness. When I saw her on the 11th the diagnosis of an ovarian tumour was simple, and her anxious appearance, the green sickness, feeble pulse, and the intense pain, all pointed to the probability of strangulation of the tumour. I therefore admitted her at once to the hospital, and removed the tumour next day. It was found to be uniformly adherent to all the tissues in contact with it, the adhesions being recent and easily overcome, but they gave a great deal of trouble from free and abundant hæmorrhage. This was controlled chiefly by the application of solid perchloride of iron to the bleeding points. The tumour itself was a multilocular cyst of the right ovary, of a uniformly dark purple colour, extremely friable, having large extravasations of blood in the walls, and especially at the base, close to the

pedicle. The pedicle was very short, and was twisted twice completely round, from within outwards and to the right. The operation was performed with complete antiseptic precautions, but the temperature and pulse curves show that she made anything but an antiseptic recovery. The pedicle was secured by the Staffordshire knot. She left the hospital on December 14th, 1879.

The next case occurred immediately after that just narrated. She was thirty-six years of age, had had children, the last four years ago. She had not menstruated for seventeen weeks, but had noticed an increase of size so rapid that it could not be explained by ordinary pregnancy. I saw her for the first time on November 10th at the out-patient department, and though the diagnosis was difficult on account of the patient being very fat, I made out early pregnancy and an ovarian tumour.

She came back on November 23rd complaining of intense abdominal pain, which had come on suddenly two days before, followed by incessant sickness. She looked very ill, and vomited green matter whilst in the consulting room. I at once sent her into the hospital and called an emergency consultation with my colleague Dr. Savage. He agreed with me that it was a case of pregnancy, with a strangulated cyst, the only argument against this view being the apparent absurdity of my having two such cases in the hospital at the same time, and the likelihood that our recent experience should lead us into too ready a diagnosis. However, we stuck to our view, and agreed upon immediate operation. This I performed, and found the case to be exactly as I had diagnosed. The uterus was occupied by a pregnancy of about the fourth month, and the tumour was a parovarian cyst of the right side, of a pearly black lustre, the ovary lying on its front in the line of incision, at least ten times as large as an ordinary ovary, being four inches long and two broad, the enlargement being due entirely to extravasation of blood in its tissue. The Fallopian tube stretched over about a third of the circumference of the tumour, running down towards its twisted pedicle, of which it formed

part. In the wall of the tumour, and especially at its base, were effusions of blood. The contents of the tumour were straw coloured, but viscid. The tumour had made three complete revolutions from within outwards and to the right side. There were no adhesions, and the operation presented no difficulty, and it was carried out with complete Listerian antiseptic precautions. She made a better recovery than the second case, but not so good as the first, to which it really had a very close resemblance. No symptoms of miscarriage showed themselves. She left the hospital on December 21st, and her pregnancy is now approaching its termination.

One feature, which was characteristic of all three of these cases, and which I have omitted to mention in connection with the second, is that the abdomen undergoes a very rapid and unusual increase in size for a few days before, or coincident with, the access of the violent pain. In two it was noticed to have occurred to a marked degree before pain was felt, and this we may easily believe to be the stage of strangulation productive of œdema and precedent to that of gangrene. This points to the conclusion that the rotation is gradual.

The symptoms recorded in all these cases are closely alike. The chief feature is the sudden accession of severe abdominal pain and tenderness, followed immediately by vomiting, which soon becomes green. The pulse rises, but the temperature does not always do so. These symptoms in the recognised presence of an abdominal tumour which may be ovarian, should lead at once to abdominal section, and they would do so in my practice, whether the tumour were ovarian or not, if there seemed to be any probability of its being possible to remove it.

As to the mechanism by which this singular rotation is produced, we may at once dismiss any explanation which attributes it to the condition of the tumours themselves, for we find it occurring in tumours of all kinds, large, small, smooth and globular, multicystic and irregular, parovarian, ovarian, dermoid and solid fibrous tumours, the only in-

trinsic conditions of the tumours being that they should be free to move, and have pedicles capable of being twisted.

Unfortunately, in the majority, or at least in a very large number, of the cases, the direction of the twist is not clearly stated, or not given at all, nor is the side on which the tumour grew clearly given.

Of the cases narrated by Rokitansky, the great majority, about four fifths, were tumours of the right side, and in a still larger proportion the twist was from the left to the right side, that is, taking the vertebral column as the starting-point, the twist travelled to the left side, and then forwards and over to the right, that being what I read as his "und ebenso kommt die Drehung nach aussen weitans häufiger vor, als jene nach innen," though it is by no means certain that my rendering is correct.

Certainly, in all of my own cases the tumour was on the right side, and the twisting in the three operated upon was as I have just described, and in the first case I have given my recollection is that it was in this direction also. It is not recorded so in my notes, however, and my memory may be in error, though I think it is likely to be correct, as the case made a more profound impression on my mind than, perhaps, any other incident in my surgical experience.

If we had exact statements on these points for a large number of cases, I think we might arrive at some conclusion as to the cause of the rotation.

In a few of the isolated cases explanations are given which seemed more or less possible to the narrators, but they do not bear the examination of extended experience. To two of these I have already alluded, and only a third requires to be mentioned. Dr. Barnes hazards the explanation that "the tumour being free from adhesions, and tolerably firm, may *roll over on its axis*. This may happen from the enlargement of the uterus tilting it over, or from over-exertion, when, one part of the tumour being more pressed upon than the opposite part, it rolls over." The part of this explanation which applies to cases where the rotation occurs in association with a pregnant uterus applies only to a small

number of the cases, even if it were sufficient, which I do not think it is, and therefore may be dismissed. The rest of the explanation simply amounts to a repetition of the fact that this singular phenomenon does occur, and is no explanation at all.

The only reasonable effort to explain the incident has been made by Klob, who has made some experiments, from which he concludes that it is the alternate filling and evacuation of the bladder which rotates the tumour. I have not been able to find the original paper, and am therefore unable to criticise the basis of his opinion, but on *a priori* grounds I think there may be something in his idea. But before I knew of this explanation, and entirely from my own cases, I had come to the conclusion that it was the alternate filling and emptying of the rectum which caused the rotation, and it is possible enough that the bladder may help. That the bladder alone should do it is, I think, unlikely, for being central its influence would be, in all probability, neutral. If it were the rectum, then this force acting on the left side of the point of rest, the vertebral column, would inevitably push the tumour in the direction in which, in at least three out of four of my cases, the movement took place; and it would certainly act more readily on right-side tumours than on those of the left side, for the former are anchored so that the pushing force of the rectum will be in the requisite oblique direction, in the plane of a screw, and very nearly at right angles to the axis of movement.

If I might venture to apply a dynamical illustration to pathology, I would say that an ovarian tumour growing on the right side with a free pedicle, and resting, therefore, with its axis inclined towards the top of the ninth or tenth rib on the left side, would be in a condition of a body having freedom of the first order, that is, free to rotate about a fixed axis, but not to slide along it. To such a body a screw, in the form of a wedge, would be applied by the rectum in the most favorable of all directions, in a direction obliquely from above downwards, across the axis of freedom and below

the equator of the moving body. Every piece of fæces which passed into the rectum, especially in the recumbent position of the patient, would act as a wedge to drive the tumour round. In obedience to the dynamic law that by a successive repetition of the process an indefinite quantity of energy may be produced, however small the initial force may be, we have at once the explanation of the phenomena of many of these cases, notably of that published by Mr. Thornton. We have, in fact, this process of rotation going on slowly until the point of strangulation has arrived, when the sudden access of pain for the first time indicates that something has gone wrong. For the bladder a similar wedge-like influence may be claimed, but from its want of obliquity, it is not likely to be so powerful an agent in the production of rotation. Both rectum and bladder would act, however, in the same direction, and if it be found on further investigation that the tumours are mostly those of the right side, and are generally twisted in the direction in which mine were, I think we may accept the rectum as the chief factor.

That this rotation may occur suddenly, that is to say, that an ovarian tumour may be twisted rapidly round two or three times in a few minutes or hours, is inconceivable.

Rokitansky says that, as one of the results of this rotation and strangulation of ovarian tumors, we may get involution and wasting of the growth, so that in many cases they may diminish and disappear; and Mr. Wells, quoting Rokitansky, seems to agree with him.

I have not, however, seen any recorded history of such a fortunate ending, and I hardly see how it could be proved, even if it did occur. But that it is possible no one can doubt.

Rokitansky publishes (1865, loc. cit.) the post-mortem accounts of fifty-eight cases of ovarian tumour in a period of four years, and in eight of these rotation of the tumour had occurred, but in four only did it seem to have given rise to strangulation and death. Rotation is therefore frequent, as Rokitansky says, occurring in about 12 per cent. of all cases, and in about 6 per cent. of all cases producing death. My

own proportion is not nearly so high, my first hundred ovariotomies including only one of the cases, and in the practice of other ovariotomists we have not as yet heard much of gangrene from rotation.

Mr. SPENCER WELLS did not think it difficult to understand how an ovarian tumour of moderate size could rotate and twist a pedicle of some length. The mere alteration from the erect to the recumbent position of the patient was enough to account for a half turn. If the twist were not enough to compress blood-vessels little effect might be produced, and it was very common in ovariotomy to notice that a pedicle had been twisted without any apparent consequence. When the veins of the pedicle are closed by the twist severe pain and bleeding into the cyst, or rupture of the cyst after inflammatory changes, might follow. He had seen two patients who died suddenly from very large bleeding within the cyst without its rupture. Until the cysts were opened the cause of the sudden death was not ascertained. Last year he (Mr. Wells) had operated on a Russian lady who was supposed to be dying of a malignant tumour because she was so extremely pallid—quite marbly white—and had a very hard abdominal and pelvic tumour. Mr. Wells removed both ovaries, and found that the larger tumour on one side was dermoid, quite black, and rotten, though not putrid, infiltrated with blood, and the pedicle so twisted as to be almost divided. This lady had completely recovered, and sent a coloured photograph to show that she had now a brilliantly florid complexion.

Dr. BANTOCK said he was just then unable to recall the exact number of cases of twisted pedicle which had occurred in his practice. He would only refer to the last two, of which one occurred in December last, and the other a week since. The former was a right-side tumour with a long pedicle, and the latter a left-side one with a short pedicle. Both were very small, under two pounds, almost universally adherent, and contained coffee-ground-looking contents. Both the patients had been the subjects of symptoms of peritonitis, which had been preceded by a sudden attack of pain. He believed that the twisting produced no symptoms whatever, being a gradual process, but rupture of a blood-vessel into the cyst was indicated by an attack of pain, sudden and severe in proportion to the amount and rapidity of effusion, as in the cases of which Mr. Wells had spoken. This condition was sooner or later followed by a subacute form of inflammatory action; hence the adhesions which were so frequently found in these cases. He thought the treatment proposed would meet with approval provided circumstances were favorable to the performance of the operation, but he feared it would most frequently happen that when the condition was recog-

nised the patient would either be moribund or already recovering, in either of which cases interference would probably be negatived.

Dr. HEYWOOD SMITH said that Mr. Lawson Tait in his valuable paper, and Mr. Spencer Wells in his observations, had come to the conclusion that where a condition of strangulated ovarian tumour was diagnosed on the advent of pain, ovariotomy should be performed, but it seemed to him that given an ovarian tumour, should pain suddenly supervene at all, ovariotomy should be performed at once, for it appeared that the pain is an indication of mischief arising which might seriously complicate the case if there was delay, and in these cases a factor was always present which did away with any doubt about operating, viz. that there were no adhesions. With all deference to what Mr. Spencer Wells said as to the wonder being that more ovarian tumours were not strangulated, Dr. H. Smith ventured to remark that in small tumours the pedicle was more often short, and so offered a resistance to twisting, and in large tumours their very size prevented, as a rule, such a contingency. With regard to Mr. L. Tait's theory of the rotation, if concurrent thought was of any value, he would say that the same explanation occurred to him (Dr. H. Smith) as the paper was read. Certain factors were necessary to produce a tendency to rotation. As the tumours were not globular one side was usually larger than the other, and so the axial radius acted upon by the distended rectum formed a lever for the rotation to take place where there was least resistance, *i.e.* forwards and to the right, as the plane of the posterior half of the tumour was in relation to a bed of major resistance behind a line joining the bodies of the vertebræ with the flank.

Mr. ALBAN DORAN remarked that Mr. Tait's theories with regard to the causes of torsion accorded with some of his own convictions, grounded on experiments he had made in the post-mortem room of the Samaritan Hospital, when examining cases of ovarian disease that had proved fatal before any operation could be performed. Supposing that a large tumour with an irregular surface lies to the right of the rectum, an accumulation of fæces may press against the pelvic portion of the growth in such a manner as to push the whole tumour about a quarter of a turn round its vertical axis. Should the pedicle be very long or short, yet inelastic, it will remain twisted after this pressure is removed, and may become still more twisted when it is reapplied. Should the pedicle be short and elastic the tumour will slip back to its normal position every time that the pressure is removed; only this pressure may be applied so long that the temporary torsion may involve damage to the vessels of the pedicle, producing all the bad effects of permanent and complete torsion after the pedicle has become untwisted. In examining the body of a patient who died in Mr. Knowsley Thornton's wards last December he found a large ovarian tumour

pressed upon, to the left side, inferiorly, by the rectum, which was slightly distended, owing to a cancerous stricture. A little artificial distension of the intestine caused it to press against the tumour so as to push its left side backwards, stretching and twisting the pedicle. In examining this pedicle Mr. Doran found that it was not twisted, but its veins were partially plugged, in all probability from the effects of intermittent pressure through frequent extreme distension of the obstructed rectum.

Mr. LAWSON TAIT replied that he was greatly obliged by the kind reception of his paper by the Society. He hoped that Mr. Thornton and Mr. Wells would publish their cases with specific details, as it was only in this way that correct conclusions could be arrived at concerning the mechanism of the twist. He was not affected by Mr. Wells' suggestion that it was probably an accidental occurrence, for if it were true generally, as it certainly was in Rokitansky's observations and in his own, that the great majority of the tumours twisted were right-sided tumours, and that they were twisted in one specific direction, it was clear that some special mechanism must be concerned in the process of rotation. The facts given by Mr. Alban Doran were emphatically in favour of the theory he had advanced, and doubtless if Mr. Doran continued his observations some valuable results would be arrived at. If a left-sided tumour could be found rotated from within outwards, and over to the left in a case where the rectum was on the right side, Mr. Tait would regard his hypothesis as proved.

A paper was then read by Dr. HARRIS, of Philadelphia, entitled, "A refutation of the marvellous account given by Professor Gardien, of Paris, in 1866, to the effect that the Princess Pauline de Schwartzenburg was delivered of a living fœtus some time after she was burnt to death."

APRIL 7TH, 1880.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—49 Fellows and 4 visitors.

Books were presented by Dr. Acland, Prof. Carl Schroeder, Prof. A. Valenta, and the Brooklyn Anatomical and Surgical Society.

Robert C. Benington, M.R.C.S., and Thomas Hamilton, M.D., were admitted Fellows of the Society, and Francis James Bailey, L.R.C.P. (Liverpool); John Oakley, M.R.C.S. (Halifax, Yorkshire); and David Palmer Ross, M.D. (Kingston, Jamaica), were declared admitted.

The following gentlemen were proposed for election:—Robert Francis Black, M.R.C.S., L.R.C.P. Ed. (Trinidad); G. H. Hames, F.R.C.S.; John Stephenson Harvey, M.R.C.S. (Boulogne-sur-Mer); Thomas Chas. Marsh, M.R.C.S.; and Sidney Parsons, M.R.C.S.

UTERINE POLYPUS.

DR. BANTOCK exhibited a specimen of uterine polypus which he had removed on the 26th February by means of the écraseur, and which was chiefly remarkable for its large size. The patient was a married woman, fifty-one years old, and the mother of three children. The symptoms had

existed for six years, but the disease had not been recognised till about three weeks previously, when the tumour was discovered under an examination instituted for the purpose of ascertaining the cause of retention of urine from which she was then suffering. Yet she presented the usual pale and waxy appearance so characteristic of the anæmia of these cases. The polypus was attached by a narrow pedicle. In its fresh state it weighed one pound three ounces. It belonged to the fibro-myomatous variety, and before being cut into it presented that physical condition of elasticity which so simulates fluctuation, and which, in the subperitoneal variety, has so often been mistaken for a fluctuating ovarian tumour. It also presented a well-marked capsule at its cut edge, but so intimately connected with the contents that only a very small portion could be separated.

MULTIPLE VESICAL CALCULI THE SEQUEL OF PROLAPSUS UTERI.

Dr. Galabin showed a number of vesical calculi, consisting of twelve large stones and about fifty small ones. These, together with a good deal of fine sand, were removed from the bladder of a woman, sixty-one years old. She had had prolapsus uteri seventeen years, and for the last ten years the procident mass had never been returned into the vagina. For about eight years she had been crippled with rheumatoid arthritis, the thighs being nearly anchylosed in a position of extension, but had been able to get about the house. She had always had bearing-down pain from the prolapse, but no symptoms referable to the bladder until six months before, although the calculi must have existed for a much longer period. She then began to have incontinence of urine during the night, and soon after suffered from forcing pain after micturition. For the last three months she had had complete incontinence of urine, and the urine was mixed with a large proportion of slime and blood.

The vagina was found to be completely inverted, and the whole bladder and uterus external to the body, the uterus being in a position of retroflexion. The procident mass was greatly swollen and inflamed, feeling like a bag of pebbles, and it was impossible to return it. Dr. Galabin performed vaginal lithotomy, with the assistance of Mr. R. F. Lane, in whose charge the patient was, a longitudinal incision being made with scissors in the median line. Twelve large calculi and about fifty small ones were removed, besides a large quantity of fine sand. The largest measured 1½ by 1¼ by 1 inch. The weight of the whole, not including the sand, was eight ounces and three quarters. The calculi appeared to be of uric acid, the larger ones having a superficial film of phosphates. The wound was at once closed with silkworm-gut sutures, the mass returned with difficulty, and a large elastic-ring pessary introduced, although without much hope that the prolapse would be thereby retained. At the end of ten days perfect union had taken place, and the prolapse had been so effectually kept up that the cut surface could scarcely be drawn within reach sufficiently to allow the sutures to be removed, the fixation of the thighs making it impossible to use any speculum. Partial incontinence of urine remained for a while, but the patient had recently written to say that she now suffered from no inconvenience, except from her rheumatism.

The mechanism was evident by which, in this case, calculi were prevented from escaping as usual, while small, from the female bladder, for the bladder was virtually converted into a kind of bottle, with the orifice uppermost. Although the patient had been under medical care for her rheumatism, she had never before asked for advice as to the condition of her uterus.

Dr. Aveling thought Dr. Galabin quite right in selecting vaginal lithotomy instead of dilating the urethra. Such a mass of stones would have been difficult to deal with by any other plan. It was a simple and safe operation, and if the sutures which closed the wound were carried through the mucous lining of the bladder, hæmorrhage, (the only difficulty which Dr. Aveling had met in

doing this operation), might be prevented. He had seen two cases in which the urethras of young girls had been completely destroyed by dragging calculi through the dilated canals.

Mr. Doran observed that he had, two years since, removed a calculus, half an inch in its narrowest diameter, from the bladder of a girl, aged nine, by dilating the urethra. In two or three days the child could retain her urine, and never had suffered since, yet the surface of the calculus was very rough. For the removal of a single stone, whether the bladder be displaced or in its normal position, dilatation appeared to be preferable to vaginal lithotomy, unless the calculus were very large. But in a case like Dr. Galabin's, where numerous calculi existed, the repeated injuries inflicted on the urethra by the movements of the forceps and the extraction of each stone would entail greater risk than the removal of the calculi through a wound in the bladder.

Dr. Rogers said he believed Dr. Galabin took the best and wisest course in cutting through the bladder instead of dilating the urethra. Had the latter manner of operating been performed Dr. Rogers thought there would have been necessarily such delay that great irritation and even serious inflammation would have followed. Dr. Rogers had incised the bladder for a like cause, and stitched it up without mischief resulting, and he had seen others perform it with like result. Dr. Rogers had also dilated the urethra and crushed stones in the bladder. In one case a large stone was encrusted on a hair-pin, this was easily crushed and brought away, as well as the pin, without much mischief following, but in a similar case like that of the author's Dr. Rogers would certainly cut as Dr. Galabin did.

Dr. Galabin said he had chosen lithotomy on account of the number and size of the stones and the great amount of inflammation present. His experience was that if the urethra were dilated much beyond the size of the index finger more or less incontinence of urine was apt to remain permanently. No disturbance had followed the operation, but the patient was relieved immediately from her sufferings.

MISSED ABORTION.

Dr. Roper exhibited a specimen of missed abortion. It occurred in the practice of Mr. Fendick. The ovum was expelled entire on the 9th of March, 1880. The embryo was shrivelled, sodden and compressed, and quite free from

decomposition. The patient at the period of aborting had been married seventy-four days. Twenty-six days before marriage, or 100 days before aborting, she was seized with phlebitis of one femoral vein, which caused well-marked white leg. A large and extensively spread-out blood-clot of old date was expelled with the ovum. The ovum at the time of expulsion seemed to be one of more than seventy-four days of gestation, and was probably older than 100 days. Might not the intra-uterine clot have been the cause of the death of the ovum, and of the phlebitis, at the same time.

DOUBLE MONSTER.

Dr. Godson showed a double monster, for which he was indebted to Dr. James Murphy, of Sunderland, who had written the following account of the delivery:

"On April 10th, 1878, at 5 a.m., labour commenced with Mrs. G—, æt. 35, then at the end of her second pregnancy, her first child being ten years old and in good health, and in every respect normal. At 8 a.m., the os was fully dilated, the pains pretty strong, occurring every five minutes, the head well down and presenting with face to pubes. At 12 noon matters were still *in statu quo*, except that a large caput succedanum had formed; and as the pains had increased without causing the head to move, though everything seemed ready for its birth, it seemed desirable to apply the forceps; and Dr. Barnes's long forceps were accordingly applied, and with a little difficulty the head was delivered, but the shoulders failed to follow, and were with difficulty brought down, and subsequently the arms were hooked down with the finger, and then for the first time it became evident that the fœtus was part of a double monster, the juncture being in front by the thorax—Class A of Dr. Playfair. The head and shoulders were then bent well forward and the left hand passed on to the buttocks, and considerable traction being thus made the breech and legs were thus delivered, the feet of the second,

and slightly smaller, fœtus then followed, and the body and head were easily brought through, with a little traction. Each fœtus was alive, and breathed for some five or six minutes, and then expired together. The mother made a rapid and perfect recovery without any unfavorable symptom occurring. The specimen consists of two almost perfect children, females,

joined together along the thorax and upper portion of the abdomen, the skin of the one being continuous with that of the other, and each child otherwise complete in itself, except at the lower portion of the abdomen, where the integuments and muscles are absent, the intestines being only covered by peritoneum, and from this the single umbilical cord arises."

The PRESIDENT remarked that the mode in which delivery took place was a common one in these cases.

REMOVAL OF FIBROUS OUTGROWTH FROM THE FUNDUS UTERI. RECOVERY.

By Clement Godson, M.D.,
ASSISTANT PHYSICIAN—ACCOUCHEUR TO ST. BARTHOLOMEW'S HOSPITAL; EXAMINER IN MIDWIFERY IN THE UNIVERSITY OF ABERDEEN.

On December 8th, 1879, I was asked by Mr. Alfred Cooper to see with him a single lady, æt 30, who had been sent to him on account of difficult and painful defæcation. Mr. Cooper believed the bowel trouble to be due to the condition of the uterus, and therefore sought my opinion.

Upon examination I discovered a tumour in the lower abdomen immediately above the symphysis pubis, reaching almost to the level of the umbilicus, of the size of a small cocoa nut, very hard and nodular, and freely movable from side to side. Per vaginam, the uterus was found low, the cervix displaced backwards, and in front of it was a resisting swelling, which appeared to be the anterior wall of the uterus in a fibroid condition. The abdominal tumour, if moved from side to side, hardly affected this, but pressed downwards it forced the womb backwards against the rectum. The probe entered the cavity of the uterus two and three quarter inches, causing the swelling in front of the cervix to rise and to be reached only with difficulty.

The patient stated that she commenced to menstruate at the age of fifteen; the flow continued for a week, after which there was an interval of a year, when it recurred and had continued regularly ever since. There was no pain or abnormality until the age of twenty-five, when the flow became diminished in quantity and clotted, though still lasting an entire week. Three years ago a troublesome leucorrhœa commenced, and there was constant headache with flatulence. About this time a small hard lump was felt below the navel; it never kept the same position for any length of time, but was generally rather to the right of the mesial line. Medical advice was sought, and a residence at

Kreuznach recommended and tried, but no benefit was derived therefrom. When the tumour was high up there was very little inconvenience, but when low down there was great difficulty in passing water. Lately the growth had become much larger, and there was a constant feeling as if the bowels wanted to act; there was, however, great difficulty in evacuating them, and the motions were small. Aperient medicine was constantly had recourse to, but the feeling of pressure in the lower bowel was beyond bearing. The general health suffered, and depression of spirits was so great that there was no desire to live. The pupils had become so contracted that reading was most difficult. If the tumour could be removed she desired it to be taken away, as life was a burden to her under its present conditions. I explained to her that I had no doubt that the abdominal tumour could be removed, but there was a growth in the wall of the womb which must remain, that on this account it was doubtful whether she would be cured by an operation, though I believed her symptoms would be alleviated. She must understand that the removal of the tumour would be attended by considerable risk to her life, whereas the nature of the growth was innocent, and would be very unlikely at any time to cause directly her death. At the same time it was likely to increase in size, and cause more trouble.

With these views Mr. Cooper concurred, and we gave her until the next day to think the matter over and discuss it with her friends.

Had I been consulted a few months earlier I should have strongly opposed an operation, but having lately been associated with Mr. Knowsley Thornton in two cases of uterine fibroids which he had removed with excellent results, I had come to look upon the operation, skilfully performed under antiseptic conditions, as hardly more serious than an ovariotomy.

On December 9th, Mr. Cooper and I again saw the patient, when she told us that, having well considered the matter as we had placed it before her, she was determined to risk the operation, if any surgeon would undertake it.

It was suggested that Mr. Spencer Wells should be called in consultation, and the same day he met us. His views were identical with ours. He rather dissuaded the patient from the operation, and only consented to undertake it because of the great distress which she suffered and her urgent entreaty that he would give her the chance of relief by removing the tumour. An impending marriage had also to be considered. On the following day, the patient having been placed under influence of bichloride of methylene by myself, Mr. Spencer Wells, assisted by Mr. Alfred Cooper and Mr. Knowsley Thornton, commenced the operation, under the carbolic spray, by the usual incision in the median line from five to six inches in length. When the peritoneum was opened, a globular fibroid tumour, with a somewhat irregular outline, came into view; it was pressed out of the incision, and a broad and rather thin attachment to the right posterior angle of the fundus uteri was brought into view. This was secured by a temporary clamp, and the tumour cut away. (As you see it now, it is somewhat shrunken by the spirit in which it has been kept). On drawing up the clamp with a view to transfixing and ligaturing the pedicle, the strain was so great that the pedicle enclosed in the blades of the clamp tore away from the uterus, which receded into the abdomen. On seizing the uterus, the torn surface was with difficulty brought into view. There was so little hæmorrhage from it that Mr. Wells, after sponging out the peritoneum, pressed a large sponge down over the uterus and introduced the sutures. After their introduction there was still so little bleeding that the sutures were tied, and the usual gauze dressing having been applied the patient was placed in bed. In the course of the evening, during coughing or vomiting, some blood had soaked through the dressing, and Mr. Wells having been sent for, removed the dressings and found a piece of omentum had been forced out between two of the sutures. Finding that there was no blood in the peritoneal cavity, he pushed the omentum back, an extra suture was introduced, and the dressing reapplied.

The patient never had any adverse symptom; the wound

healed rapidly, on January 2nd she went out in a Bath chair, and on January 11th she was able to travel to Brighton.

She called upon me early in March to say that she was perfectly well; all her troubles had disappeared. She could walk several miles without fatigue, and had lost her low spirits. Her sight had much improved. She could not be sufficiently grateful for what had been done for her.[1]

The question naturally occurs, Was so serious an operation justifiable under the circumstances? Had she been a poor woman, obliged to work for her livelihood, and incapacitated from so doing by the tumour, I should never have hesitated recommending the operation. She was, however, not so situated, and it was only her own determination and her distressed state that influenced us to consent to it. The result is, perhaps, the best evidence in support of the wisdom of the course pursued. But, had she not survived the operation (and the risk of life must be admitted as great), what then would have been the verdict?

REMOVAL OF UTERINE FIBROIDS BY LAPAROTOMY,

By J. Knowsley Thornton, M.B., C.M.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

Rather more than twenty years have passed since a fierce controversy arose as to whether ovariotomy was a justifiable surgical procedure. Now, that operation is one of the most successful of great surgical operations and one of the greatest triumphs of British surgery. That this is so, is chiefly due to one of the Fellows of this Society.

To day, another very similar operation is on its trial; and opinions differ widely, not only as to its future, but as to whether it ought to be recognised as justifiable. I trust that the records of ovariotomy teach a lesson which will

[1] She saw Mr. Wells in June, 1880, and was then in excellent health.

enable us to discuss hysterectomy and its modifications in a calmer and more judicial manner than that which was displayed in the early debates on ovariotomy.

I am one of those who believe that the removal of uterine fibroids by laparotomy is not only justifiable, but is an operation with a position in the immediate future in no way second to that now held by ovariotomy.

I bring forward two cases to-night, which I trust may aid in the settlement of this question.

Before I record the cases, I will briefly allude to the objections to the operation, and endeavour to meet them on general grounds; and then point out how my two cases seem to support my arguments.

So far as I know, the chief objections to the operation are: 1. That uterine fibroids differ from ovarian tumours, because they do not of necessity progress to a fatal termination. 2. That they are more often relieved, checked in their growth, or cured by medical treatment or by surgical procedures of a simple and comparatively safe nature. 3. That the operations for their removal by laparotomy, are much more dangerous to life than are similar operations for the removal of ovarian tumours.

The first of these objections is undoubtedly true in the great majority of cases; but I think fibroids more often kill than is generally believed, if not directly, by continuous growth and interference with vital organs, as in the case of ovarian tumours, than indirectly by prolonged suffering, hæmorrhage, or obstruction of intestine, or interference with the ureters. In rarer cases, they kill by rapid and excessive growth, either as solid tumours or after cystic degeneration. In comparing fibroids of the uterus with ovarian tumours in this relation, we must not overlook the fact that there are plenty of cases on record in which ovarian tumours have been carried through long periods without shortening life, and without preventing their bearer from fulfilling all the ordinary duties of a woman, even to the bearing of many children.

Such considerations as these, while they do not destroy

the argument founded on the relative mortality of the two diseases, undoubtedly weaken its force considerably. Moreover fibroids, especially when comparatively small, cause much more suffering, and more often tend to a permanent invalidism, than do ovarian tumours. But is it necessary, in order to make a surgical procedure justifiable, to prove that without it life will be shortened? If so, surely all surgeons must constantly perform unjustifiable operations when they operate for the relief of deformities. Many of these operations are (or at any rate were, before Listerism became general) very dangerous, and but few of them are operations of necessity. Thanks to Professor Lister, we are now able to perform what may be called operations of convenience with but small risk; but what applies to the general surgical procedures of this class applies equally to the operations now under consideration, with some exceptions to which I shall have again to refer.

The second objection I have mentioned is incontestable; but no one, so far as I know, has as yet advocated the major operation for the removal of fibroids until milder measures have failed to effect a cure.

The third objection is true up to the time when antiseptic measures became the rule in all abdominal sections; but I doubt if the mortality of operations for the removal of uterine fibroids was, even up to that time, greater than was the mortality in the early and struggling days of ovariotomy. I even doubt if the mortality, in competent hands, was greater than that of ovariotomy before its antiseptic performance became general, if all its statistics could be collected and published. The statistics of ovariotomy as often quoted are those of a few successful operators, not those of the operation generally.

I would advance, then, the following proposition for discussion:—"It is justifiable to make an exploratory operation, with perfect antiseptic precautions, in any case of fibroid tumour of the uterus which has resisted medical treatment, and which is either endangering life or preventing the subject of it from fulfilling the ordinary duties of her sex and position." The

great difficulty lies in the fact of the uncertainty of differential diagnosis between the varieties of uterine fibroids, but to this point I will return after recording my present cases.

CASE 1 was sent to me in September, 1879, by Dr. Clement Godson, who thought it suitable for operation, and asked me if I agreed with him, to take her into the Samaritan Hospital. She was a single woman, thirty-eight years of age, and by occupation a cook; a fairly healthy-looking woman, with the general colouring of face so often accompanying fibroids of the uterus.

History.—Never very strong, but has had no serious illness. Twelve months back began to suffer from "dropping of the womb," but only in August, 1879, had her attention specially directed to her condition by "stoppage of the water." She had frequently suffered from dysuria, but had never before required the catheter to be used. She noticed that when the water was stopped the womb went up, but at once descended after the bladder was emptied. These "stoppages" recurred at intervals, and she began to suffer from attacks of pain in the womb and back. When I first saw her, these attacks had become more frequent and more severe, totally preventing her from following her occupation while they lasted, and consequently rendering it difficult for her to keep her situations.

Dr. Godson's diagnosis was, "Procidentia due to fibroid outgrowth pushing down the uterus." The uterine cavity was not enlarged nor elongated as measured by the sound. The catamenia were regular; latterly more free, but not excessive.

The question of course presented itself, Is it justifiable to suggest operation? I agreed with Dr. Godson that it was because the woman's position in life rendered it imperative that she should be fit to follow her occupation. Before definitely deciding, I placed her in the knee-elbow position, and made a careful and prolonged attempt, by raising the abdominal tumour and pressing up the uterus, to lodge the outgrowth above the brim, but failed. I saw at the operation afterwards, that had I succeeded I should probably have rendered her condition much more serious, as the enlarged

uterus would have completely blocked and wedged up the pelvic inlet. Having explained her case to her, I proposed an antiseptic exploratory operation, having for its aim the mere removal of the uterine outgrowth; but I told her the operation once commenced I might have to do more than I expected, and the result proved the wisdom of the caution.

On November 27th, 1879, at 9.30 a.m., the patient was placed under the influence of bichloride of methylene by Mr. Doran, and, assisted by Mr. Meredith, I commenced the operation with my usual antiseptic precautions. A four-inch incision exposed the tumour, and passing in my hand I found that it was an outgrowth from the anterior surface and right side of the fundus uteri. The uterus itself was of the size of a cocoa-nut, and smoothly and regularly enlarged. The pedicle of the outgrowth was soft, very vascular, and about the diameter of a florin—good either for ligature or clamp. I applied a strong silk ligature round it, and over that a medium-sized Spencer-Wells clamp; but, finding that the latter held the uterus awkwardly (as explained above in speaking of the attempt to push it up above the pelvic brim), I removed the clamp and transfixed with medium silk, tying in two halves and suturing the peritoneal edges of the stump with fine silk, as may be seen on the specimen. Had I been content with this operation I do not think any danger could have attached to it, and the whole would have been over in half an hour. The question, however, arose as to how far she would be permanently benefited, and whether it would not be wise to remove the ovaries, in order to bring on an artificial menopause, and arrest the further enlargement of the uterus. I transfixed the base of each ovary, and tying in two halves, removed each with its tube. I now found very serious hæmorrhage going on from a split in the uterine tissue between the large uterus and the stump of the left ovary; this split can be well seen in the specimen. This had evidently occurred in lifting the mass out of the pelvis at first, but I doubt if it would have given trouble had it not been farther opened in drawing up and removing the left ovary. All attempts to stop the hæmorrhage from this tear failed,

twice after apparently succeeding in stopping it I put in and partly tied up the abdominal sutures, only to find the pelvis filling with blood, and to remove them again. So I decided to remove the uterus. This accident is similar to one recorded by Dr. Savage, of Birmingham, in the very successful series of cases he lately published, and to one which happened to myself in the case of removal of fibroid outgrowth during pregnancy; but in the latter I was able to check the hæmorrhage by threading fine sewing cotton in and out of the uterine tissue round the split, and tying it up like the mouth of a bag. Having decided to remove the uterus, I applied a strong whipcord ligature round the centre of the organ, and the largest-sized Spencer-Wells clamp over it, both well below the bleeding point. Having sponged out the peritoneum, and sutured as usual, I used perchloride of iron to the stump outside the clamp, and applied the usual gauze dressing. It was remarkable how large and deep a recto-uterine pouch remained, even after the stump was brought outside.

The operation lasted from 9.30 to 12.15. The patient when placed in bed was cold; temp. 97·8°, pulse 68, resp. 28; pupils dilated and insensible to light, and lips rather blue; but during the whole procedure, there was complete absence of anything like serious or alarming shock. She rallied rapidly, and I need not detain the Society with any prolonged account of the after progress, which was perfectly satisfactory. She did not suffer from unusual pain; the highest temperature was 100·8° F., the quickest pulse 100, and this only on the first day; on the second it was 84, and by the third day the temperature was practically normal. I found no difficulty in keeping the wound aseptic, and the large stump remained sweet for more than a week, and at no time gave anything in the shape of odour, but a slight sourness when the dressings were changed. Half the sutures were removed at the end of a week, the remaining half on the twelfth day. The bowels were cleared on the tenth day; the clamp was removed on the fifteenth day; the patient was up on the thirty-third day; and went to the Convalescent Home

on the forty-sixth day, never having had a drawback, simply a slow convalescence from the large granulating stump.

The total weight removed was five pounds.

This operation was a removal of the supra-vaginal portion of the uterus together with both ovaries; and to such operations I would apply the term Hysterectomy, adding, "with removal of one ovary or of both," as the case may be. If these operations are to take their place amongst recognised surgical procedures, the sooner we have an accepted nomenclature for them the better. It has been common to speak of all of them as hysterotomy, but this is certainly an incorrect descriptive term, as it merely implies "cutting the uterus," and has long been used to designate cutting operations performed on the cervix uteri; hence its use for this very different operation must necessarily lead to confusion.

I do not think hysterectomy is quite the right term, as it implies "a cutting out" of the uterus, and would therefore be more correctly applied to Freund's operation. Still it seems the best word we have, and it has not been appropriated either to cutting operations performed on the cervix, or to the complete extirpation of the uterus; ἐκτέμνω is also used to signify "a cutting off," and all these removals of uterine fibroids are cuttings off, merely varying in the amount of the uterus removed.

To many of the operations, however, the term hysterectomy is not at all applicable, as they are mere removals of outgrowths which are often not so closely and intimately connected with the uterus as are many ovarian tumours; and yet operators of eminence apply the terms hysterotomy or hysterectomy to these comparatively trifling procedures. So long as this confusion in description exists so long must the whole class of operations remain under a cloud.

The ordinary cases naturally divide themselves into three groups, and as their physical signs and the symptoms to which they give rise are usually sufficiently distinctive, so are the characters of the operation necessary.

First. We have cases such as the one I have detailed; and here the complete operation is necessary, and, in my opinion,

it is better in these cases to remove both ovaries also, though it is not in all cases absolutely necessary. This operation, "hysterectomy with removal of both ovaries," is one of the most formidable in surgery, both as to the difficulty likely to be met with in its performance and as to the danger to life.

Second. We have "the removal of sessile or intramural fibroids, with or without the removal of the ovaries." In these cases, again, unless there is some special contra-indication, I should remove both ovaries, as, without such removal, we cannot feel certain of a permanent cure. Here, however, the question is more open than in the first operation, because we can generally leave one oviduct, at any rate, clear of the operation. The operations in this Class II are almost as difficult and dangerous as those in Class I; but still they differ from them in that the uterus as an organ is not *necessarily* interfered with.

Third. We have "the removal of pediculate outgrowths," and, if these outgrowths are free from adhesion and the operation is performed with perfect antiseptic precautions, I believe it is almost free from risk, certainly as much so as is the removal of a simple non-adherent ovarian cyst.

Cases are not rare in which this outgrowth is the cause of all the trouble and inconvenience the patient suffers; and though its removal cannot be said to cure her complaint, if a large fibroid uterus or other similar sessile growths are left untouched, it *practically* cures, because these cause her no subsequent inconvenience.

In the operations included in Classes I and II, we cannot be certain we shall not have to open into the uterine cavity, or, in other words, we cannot be certain of the asepticity of our proceedings. Herein lies the great difference in the danger of the procedures. Though, of course, apart from this, the danger also grows with the extent of mutilation suffered by the uterus in the three classes.

What I am anxious to enforce is that all who perform laparotomy for the removal of uterine fibroids, should be careful in publishing to distinguish clearly whether the

operation of hysterectomy, or one of its modifications, has been performed.

I will now briefly record my second case, which belongs to Class II.

"Removal of sessile uterine fibroids and right ovary by laparotomy, the uterine cavity not having been opened."

The patient was single and thirty-four years of age; her general appearance fairly healthy, but complexion somewhat sallow. For six years she had been more or less constantly under treatment for fibroid tumour of uterus, and, during this time, she had passed through the hands of some of the most distinguished gynecologists in this country and on the Continent. All had agreed as to diagnosis, and all had said that operation was out of the question. Having been requested to examine her, with a view to operation, by Mr. King, of Stratton, I was at first inclined to agree with the general verdict; but, after a careful examination under chloroform, I changed my opinion in so far that I became convinced it would be possible to remove the fibroids, and I explained my change of opinion to the patient and her friends, not in any way understating the risk. Our President kindly saw her with me, and agreed that, under the circumstances, the operation was justifiable, if the patient fully appreciated the risk. Our grounds for this opinion were the rapid growth of the tumour in spite of all attempts to check it. There was no serious hæmorrhage, and not constant or excessive pain, though this was increasing, and her life was becoming more and more that of a confirmed invalid. After I had given my opinion, Dr. Playfair again fully explained the risk to the patient and her mother, and certainly did not minimise it.

I should have mentioned that at her age the menopanse was too distant to make it enter into our consideration.

The bowels would only act with enemata, and there was evidence of pressure on, and interference with, the functions of the ureters.

On December 4th the patient was placed under the influence of bichloride of methylene by Dr. Percy Boulton,

and, in the presence of Drs. Playfair and Clement Godson, and assisted by Mr. Meredith, I performed the operation. Commencing with a four-inch incision, I was obliged to extend it to five and a half, owing to the great depth of fat in the parietes. The uterus was exposed, lying in front of the tumour, which was attached to it by a very thick vascular pedicle on its right side and just in front of the right oviduct. From this pedicle a broad, thin, membranous attachment extended right across the top of the fundus, and then became merged in the broad sessile base of the tumour which connected it with the cervix deep down into the pelvis and rather to the left side than the right. Some omentum, the right oviduct, and ovary, were adherent, and I thought it safer to remove the latter, as it was torn, and bled rather freely. The left ovary was healthy and free from the tumour, so I left it alone. The tumour was gradually separated from the uterus by cutting and enucleation, temporary clamps being applied, and the stumps afterwards being secured by transfixion with silk ligatures cut off short. The operation was long and tedious, and during the necessary work deep in the pelvis I was very anxious as to the safety of the left ureter. Having finished with the main tumour, I removed a small sessile fibroid from the back of the cervix, having first transfixed and ligatured its base. This had been giving much trouble, preventing the patient from sitting in an ordinary position. The mass removed weighed four pounds.

The after-treatment and progress do not require much note. The highest temperature was 100°, on the afternoon of the first day, and the quickest pulse 104 on the same day. On the third day the temperature was normal, and it did not again exceed 99°. Sickness was unusually troublesome for three days, and the retching was so violent that I feared the wound might give way. I am inclined to think the irritation of the uterine tissue by the many ligatures it carried was the chief cause of this. At the end of a week I removed the alternate sutures, and the rest on the ninth day. The bowels were cleared by enema on the tenth day, and

the wound was quite sound at the end of the fortnight. The patient was up at the end of the third week, and the period came on some days later, just four weeks after the operation, and lasted five days. Five weeks after the operation the patient went into the country quite well. I have since heard that the second period came to time and was normal.

These two cases together really illustrate the whole subject remarkably well.

The removal of the outgrowth in Case 1 gives an example of the simplest operation.

Case 2 is a fair average specimen of the dangers and difficulties met with in removing sessile fibroids; while Case 1, completed, is a fair example of the operation of hysterectomy with removal of both ovaries.

If it were possible always to diagnose accurately the variety of fibroid we have to deal with, my proposition might be made, "It is justifiable *to operate*" instead of "*to make an exploratory operation.*"

In the present state of our knowledge, however, all these operations must be exploratory, and we can only decide whether it is right to go on when we can actually see and handle the tumours.

I am quite convinced, however, that with increased opportunities for observing the way in which these tumours grow and their connections with the uterus, *i.e.* with more operations for their extirpation, our power of accurate differential diagnosis will be much increased, and with it the success of the operations.

We have to learn by experience what cases of fibroid can be treated by removal with small risk, moderate risk, or grave risk, and then weigh the probable risk of operation in any given cases against the sufferings of the patient, and the risks she runs without surgical aid.

Dr. BANTOCK referred to a case in which, more than two years ago, he had opened the peritoneal cavity only to find that he had to deal, not with an ovarian tumour as diagnosed, but a uterine fibroid, whose connections were so extensive that he was obliged to close the wound. The point of interest in this case was the fact

that the tumour had since undergone cystic degeneration; for last autumn, the tumour having increased in size, her medical attendant was able to draw off seventeen pints of fluid by means of the aspirator. He then gave a short history of two cases in which he had removed the tumour by abdominal section. The first was a small tumour about two pounds in weight. The pedicle formed by the uterine body was ligatured and left in the peritoneal cavity. Septicæmia resulted from the escape of a small quantity of blood from the stump and the establishment of a connection between the peritoneal cavity and the vagina through the uterine canal. This was brought about by the peculiar nature of the uterine tissues, so abounding in muscular and elastic elements which caused them to yield before the force of the ligature. Thus, it happened that at the post-mortem examination a No. 6 catheter could easily be passed along the canal, although the mucous membrane presented distinct evidence that the constricting force had reached the deepest parts of the enclosed tissues. This was a most instructive fact, and would seem to warn us against leaving the pedicle in the peritoneal cavity when the uterine cavity was opened. In the second case the tumour weighed twelve pounds, and afforded a good example of the way in which a hard fibroid had become cystic. There were very abundant adhesions to omentum, small intestine, and mesentery, and many ligatures were used. The pedicle, which was about three inches in diameter and very vascular, springing from the fundus uteri, was first ligatured in four divisions, but owing to the thickness of the pedicle the bleeding could not be then controlled. It was then secured by a stout silvered-copper wire applied by means of Cintrat's serre-nœud, and two needles were passed through the stump transversely, so as to keep it outside. In the fundus uteri there was a small fibroid, and from the back of the uterus depended, by a long and slender pedicle, two very hard fibroids, as large as a Barcelona nut. All these were left undisturbed. The patient made an excellent recovery. The treatment of the pedicle was the most important question from the operative point of view. Whether it should be subjected to torsion, as accidentally happened in Dr. Godson's case, after the method of MacLeod, or be secured by ligature, or clamp, or wire, and whether it should be treated extra- or intra-peritonally, would depend on circumstances and the predilection of the operator. He was assured there was a great future before this operation, and he hoped to see the day when its success would rival that of ovariotomy.

Mr. Doran believed that the most serious question with regard to the removal of the uterus or of uterine growths was the relative safety of appliances for securing the portion left in the abdominal cavity. Both the ligature and the clamp involved great dangers. In the fatal cases mentioned by Dr. Bantock he had examined the stump of the uterus and found it tightly secured by a

stout silk ligature, but on laying open this stump a deep circular ulcer was found, exactly corresponding to the line of the ligature without, and its base was, all along, half on the distal, half on the proximal side of the silk. On the other hand, in a fatal case under Mr. Thornton's care, the pedicle of a large fibroid outgrowth had been secured by the clamp. In examining the stump Mr. Doran found that, though the clamp had been screwed as tightly as possible without cutting into the uterine tissue, a slough lay in the constricted portion and extended from the raw surface of the stump into the walls of the uterus. Hence the ligature might defeat its own object by establishing, instead of cutting off, a channel for the conveyance of septic material from without to the raw surface of the stump, and the clamp, when made secure enough to stop hæmorrhage, might so bruise the tissues it constricts as to produce sloughing that might extend distally and proximally.

The PRESIDENT congratulated the Society on the interesting papers which they had heard read, which referred to a subject of great and increasing importance, which had not yet been discussed by the Society. There could be no doubt that this operation was one which had a great future before it, but with regard to the precise indications for which we had not yet sufficient material at our disposal to justify any very positive conclusion. His experience of this operation would certainly not induce him to agree to the statement in Dr. Godson's paper that it was not more dangerous than ovariotomy. On the contrary, from what he had seen of it, he should say that not only was it a much more serious, but, as a rule, a much more difficult operation. There was this great difference between the two diseases, that while a patient with ovarian tumour rarely lived if left to herself, a person with fibroid rarely dies. It was, therefore, only in very exceptional cases of fibroid tumour that an operation was indicated. Such was one of Mr. Thornton's cases, which he had had the advantage of seeing. Even here the operation was not absolutely necessary so far as the life of the patient was concerned. Still the lady, a person of great intelligence, had for many years been reduced to such a state of complete invalidism from constant suffering, that after having the risk to be undergone fully and distinctly explained to her, she deliberately elected to submit to it rather than live a life of misery and uselessness. Under such circumstances he did not feel justified in withholding his approval, and the result fully and happily justified the course pursued. Many such cases existed, and it was in such that the operation found its justification. Now that antiseptic precautions had so materially lessened the dangers of abdominal surgery, this operation would doubtless be greatly extended, and he trusted that the discussion it would receive would be of value in increasing our knowledge of it.

Dr. MATTHEWS DUNCAN would not attempt to criticise individual

cases such as the remarkably interesting ones read this evening, for very much depended, in the question of their being justifiable, on the weight or meaning attached to pain or suffering, and this could not be at all justly appreciated by third parties. Such cases, however, and others, demonstrated that the extirpation of fibroids by abdominal section was a feasible operation, successful even in unfavorable circumstances, and one for which there was a place in legitimate surgery. Great reputations had been made in the course of establishing for ovariotomy its place in surgery, and such well-won distinction could not be reaped again on that field, but a younger race of surgeons had before them a still more difficult task, the establishing of the operations now under discussion, and doing so would deserve the highest renown. The difficulties of the operation were more considerable than in ovariotomy, but upon these he would make no remark. Surgeons had, as plenty of cases testified, already succeeded in overcoming them. As to the special cases suited for the operation, much wisdom was required to judge; and much knowledge of the natural history of fibroids had still to be acquired before the extent of the applicability of the operations was nearly settled. Although such extent would be always limited, as compared with that of ovariotomy, yet increased knowledge of the natural termination of fibroids would, he believed, certainly extend the use of the operation beyond what many timid men at present imagined. For, besides the pains and chronic ill-health often caused by fibrous tumours, the perils of abortion, and of labour, such tumours were liable to dangerous diseases and degenerations, liable to induce peritonitis, acute or chronic, liable even to induce cancer, especially of the peritoneum. The paramount danger of fibroids arose from the bleeding which accompanied them, and this produced a fatal result more frequently, he believed, than was generally supposed. He had seen several deaths from the bleeding of fibrous tumours; some of them produced suddenly and directly by the hæmorrhage; others suddenly or more slowly as a consequence, not of the bleeding directly, but of the extreme anæmia it had produced. He had lately seen a fibroid fatal from peritonitis induced by a rough railway journey; and he had had a case where there had been no bleeding for many months, and where death was almost suddenly caused by pulmonary œdema in the hydropericardium and hydrothorax, occurring in connection with excessive anæmia.

Dr. Heywood Smith said he wished first of all to criticise Mr. Thornton's use of the word laparotomy to designate abdominal section in the median line. He (Mr. Thornton) was not alone in so doing, as Dr. Fancourt Barnes, in his book on midwifery, had spoken of the incision in Cæsarean section as laparotomy. The word λαπαρον meant the portion between the ribs and the crest of the ileum, *i.e.* the flank. In the operation of laparo-elytrotomy

the word was correctly used as the incision began in the flank, and it was, therefore, much to be regretted that any proposition had been made to use the word in an ambiguous sense. If a new word was needed to supersede "gastrotomy" perhaps "cœliotomy" would do, from κοιλια. Mr. Thornton was right in using "hysterectomy" in preference to "hysterotomy," as the former expressed the operation as clearly as did iridectomy in the specialty to which it belonged. He next wished to ask for more information about the treatment of the stump of the cervix in these cases, and, as the greater success seemed to have been with the clamp, whether some means could not be devised by stitching together the edges of the lining membrane of the cervical canal, or trying to get it to close by the actual cautery, and so lessen the chance of septic absorption. In a case he recently exhibited where he had performed hysterectomy for malignant disease the stump was found to have undergone a remarkable change; it had become, by the contractile tissue of the uterus, pushed up, in spite of a tight ligature, into a conical projection. The other steps of the operation, though formidable, are yet fairly agreed upon. What we want is more reliable information with regard to the treatment of the pedicle in order to guard against the oncome of peritonitis.

Dr. FANCOURT BARNES remarked, in reply to Dr. Heywood Smith, that the word λαπάρη signified the soft part of the body between the ribs and the hips. He therefore used the term laparotomy to signify an incision through any part of the abdominal wall between those points.

Dr. GRAILY HEWITT mentioned, as illustrative of the subject now under discussion, a case which had come under his notice some years ago, that of a lady suffering from considerable enlargement of the abdomen due to ascites and presence of a large tumour. The tumour proved to be a large fibroid of the uterus, connected with that organ by a broad but thick pedicle. The tumour was removed, and the patient is still alive and well. In this case the tumour excited so much irritation in the peritoneal cavity that death would certainly have occurred speedily had the operation not been performed. He considered that the indication for operation in such a case as this was clear enough. The diagnosis of the case just mentioned was not made before the operation. The tumour was thought to be ovarian, but proved to be uterine.

Dr. CHAMPNEYS said that the legitimate proceeding of lifting impacted fibroids out of the pelvis was not without risk. This was illustrated by their great liability to tear (as happened in one of the above-described cases), such tearing often leading to severe and persistent hæmorrhage. In such a case symptoms of internal hæmorrhage should indicate prompt exploration of the abdominal cavity.

Dr. GODSON, in reply, said that in contrasting the operation for

the removal of fibroids with ovariotomy he referred to those instances of the latter in which complications existed. Many of these presented the greatest difficulties. He had recommended the removal of uterine fibroids in four cases, and had assisted at the operations. All the patients recovered.

In reply, Mr. THORNTON deprecated the fastening of the pedicle up to the abdominal wall as a dangerous practice, abscess in the pedicle or in the abdominal parietes, and even pyæmia, resulting from it. He agreed with Dr. Matthews Duncan as to the necessity for, and importance of, increased study of the natural history of fibroids, and thought the record of his experience as to methods of fatal termination very valuable. He had lately seen an example of the peculiar degeneration referred to by Dr. Duncan. He would remind the President, as Dr. Godson had done, that the difficulty and danger of operation varied with the nature of the fibroid. Many ovariotomies were incomparably more difficult than the removal of a pediculate subperitoneal fibroid. In answer to Dr. John Williams, he did not think it was possible to lay down more definite rules as to when operation was or was not justifiable and possible than those contained in his paper. All operations must be more or less exploratory. Having brought forward two successful cases to illustrate his paper, he would take the opportunity of stating what his entire practice in this operation had been, as he had no wish to publish only successful cases. There were on the table, besides the tumours removed in the cases he had related, the tumour from the fatal case referred to by Mr. Doran, and also a fibro cyst of the uterus which he had lately successfully removed in the country. He had now operated for uterine tumours twelve times; in ten of the cases the operations were completed, and in two they were not. Four of the former died and one of the latter. The complete cases might be thus classified:—Three complete hysterectomies, with removal of both ovaries, two recoveries, and one death (septicæmia). Three removals of fibro-cystic tumours of uterus, all recovered. Removal of fibroid outgrowth during pregnancy ('Trans. of Obstet. Soc.,' vol. xxi) patient died of obstruction of intestine on the fifth day. Hysterectomy with removal of one ovary, death from hæmorrhage. Two removals of fibroid outgrowth, and in each, also, one ovary, one recovered and one died (septicæmia). Two exploratory operations: one a large fibroid uterus not interfered with, patient recovered and has been much relieved by the operation; the other a fibro-cyst of the uterus; patient in a most hopeless state when the exploration was made; a large quantity of horribly fœtid fluid evacuated and the incision closed; patient died.

WEDNESDAY, MAY 5TH.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—38 Fellows and 11 visitors.

Books were presented by Dr. Thomas A. Emmet, Dr. James R. Chadwick, and Dr. Walter R. Gillette.

F. Ernest Pocock, M.D., was admitted a Fellow, and H. N. MacLaurin, M.D. (Sydney), Arthur Mudge Branfoot, M.B. (Madras), and John B. Fry, M.R.C.S. (Swindon), were declared admitted as Fellows of the Society.

The following gentlemen were elected Fellows:—Robert Francis Black, M.R.C.S.; George Henry Hames, F.R.C.S.; John Stephenson Harvey, M.R.C.S.; Thomas Charles Marsh, M.R.C.S.; and Sidney Parsons, M.R.C.S.

ENCEPHALOCELE.

DR. GODSON showed photographs and a cast of the head of an infant the subject of a large encephalocele. The child had been born at full term, and lived to the age of four weeks. The mother had given birth to four children previously, one of whom had imperforate anus. When two days old the child was seen by Dr. Godson, in consultation with Mr. Powdrell; the head with the brain tumour resembled an hour-glass; the pedicle between the two was very small, only measuring three and a half inches in circumference,

while the tumour itself was twelve inches antero posteriorly, and eleven and a half inches from base to summit. As it appeared to contain fluid, Dr. Godson tapped it with a morphia syringe and drew off three ounces of bloody serum. Very little reduction in the size took place. When the tumour was pressed the child showed signs of pain,

though she never cried at any time. Eighteen days after birth the tumour burst, and a considerable amount of yolk of egg-like fluid was discharged, the swelling becoming much less, and of firmer consistence. Though the child took the breast well she gradually wasted and became a complete skeleton. From some unaccountable reason the right hand became swollen and œdematous. There were no convulsions till just before death.

Mr. Eve, of St. Bartholomew's Hospital, had made a post-mortem examination, and the following was his report:

"The skull was small and ill-developed, especially the frontal region. A soft, flattened, spheroidal mass was attached by a narrow pedicle to the uppermost part of the vertex. On either side of the apex of the mass there were two ulcerated apertures in the skin covering it, as large as a crown piece, through which the contents protruded.

"On laying open the skin, the tumour was found to be filled with a discoloured mass of brain substance, enclosed by membranes, which were almost entirely covered by a thick layer of lymph and gelatinous pus.

"The surface of the projecting brain substance presented the ordinary convolutions. The pedicle of the mass, supported by the thickened membranes, passed through the anterior fontanelle, which was not much enlarged.

"On removing the brain from the skull the nerves at the base were found to be normal. The cerebellum was small, and its various parts were not differentiated; it was attached along a considerable extent of the posterior surface of the medulla and elongated pons varolii. The right half of the cerebrum was fairly large; the left half was much smaller, but in both a fissure of Sylvius and temporo-sphenoidal lobe was observed.

"No trace of the corpus callosum existed; but a narrow band of white substance, as large as an optic nerve, united the two anterior cerebral lobes.

"A column of brain substance extended upwards from the pons varolii, appearing, in fact, to be an abnormal elongation of this structure and the crura cerebri; in passing upwards it gave off on either side a peduncle to the cerebral hemispheres, and was then continued into the mass of brain substance external to the skull. Narrow bands of brain substance passed between the extra-cranial mass and the cerebral hemispheres. Lymph was effused beneath the membranes generally.

"Judging from the relation of the parts, I conclude that the extruded mass corresponded to the upper and posterior portions of the hemispheres. A larger portion of it appertained apparently to the left hemisphere in correspondence with the smaller size of this half of the cerebrum."

ON RECORDING THE FŒTAL MOVEMENTS BY MEANS OF A GASTROGRAPH.

By J. Braxton Hicks, M.D., F.R.S., F.R.C.P., &c.,
OBSTETRIC PHYSICIAN AND LECTURER AT GUY'S HOSPITAL; PRESIDENT OF HUNTERIAN SOCIETY; &c.

During the year 1878 I made some attempts to obtain readings of the pulsation of the fœtal heart through the mother's abdominal walls; and although I have failed so far in this particular that I have as yet no positive reliable tracings, yet in the course of my investigations I was rewarded by many novelties connected with the walls and contents of the abdomen, that I was amply repaid in other directions. Some of these I have described in two notes read before the Royal Society, and published in their 'Proceedings' of March, 1879, copies of which I lay before you, entitled "On the Auxiliary Forces concerned in the Circulation of the Pregnant Uterus in Woman," and "Note on the Supplementary Forces concerned in the Circulation of the Abdomen in Man," and others I hope yet to be able to elaborate. However, in the meantime I am anxious to call the attention of the Society to the fact that the fœtal movements can be registered in the same manner as can the cardiac movements.

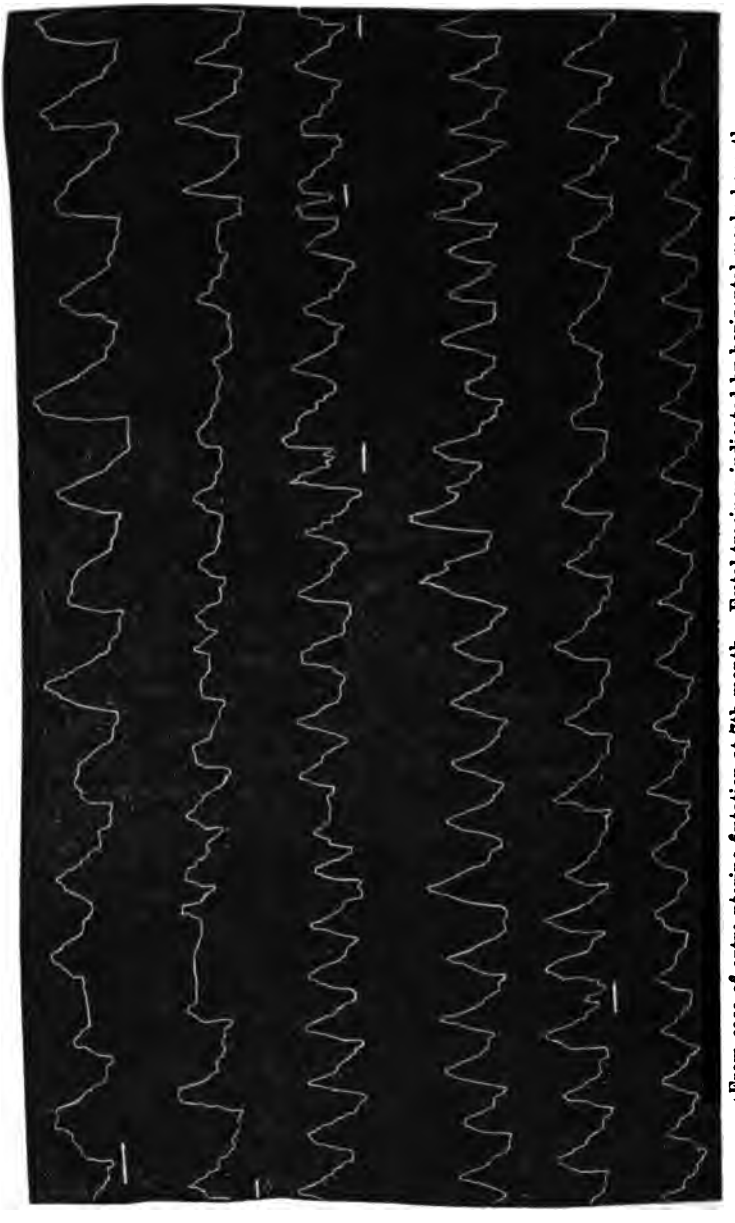
On lightly tying an instrument like a cardiograph on the abdomen of a person lying on the back, we obtain a reading which may be called the respiratory wave (an account of which will be found in the "Note on the Supplementary Forces concerned in the Abdominal Circulation in Man"). It may be briefly stated here that this wave represents the effect of the respiratory act on the abdomen and its contents. It is best seen when the tension of the abdominal wall is well marked; and least perfectly when the walls are relaxed. I have shown that this wave will be interfered with by any movements of the body, such as moving the arm or leg, or

by coughing, laughing, or giggling. These interrupting marks are well shown in the illustrations accompanying the note referred to. But the respiratory wave tracing is also interrupted by the movements of the fœtus, or rather the tracings of the fœtal movements are superimposed upon the respiratory wave. Now, the fœtus moves in various manners, but in two principally—1, by sudden jerks; 2, by turning slowly about in utero. Now, the first kind is manifested in the tracings, by a sudden rising upwards of the line, similar to those produced by the sudden movements of the mother's limbs, so similar that it is at present impossible to distinguish them; and the second kind is registered by a gradual elevation of the line of wave for some distance, and then a similar falling, till the original level is reached. There is another uprising within the abdomen which produces something similar, namely, the movements of a coil of distended intestine as in some forms of tympany. At present I am not aware of any means by which the readings of the fœtal movements can be diagnosticated from these other kinds, excepting by being certain as regards the first that no movement of the limbs or body took place at the time the record was made; and as regards the other that there was dulness and not resonance on percussion previously. Of course these fœtal movements are best traced after the fifth month of pregnancy, how early they can be I am not at present able to say.

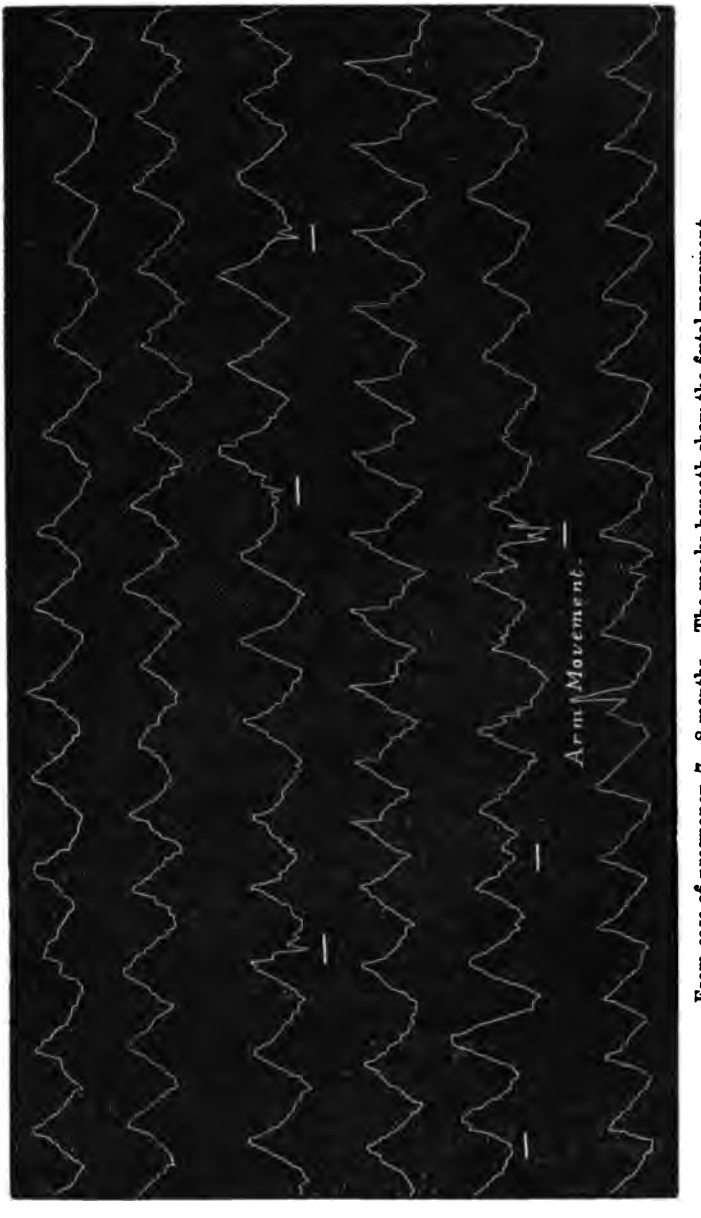
What value can be assigned to these records I cannot at this period give any estimate, such as it has, I have thought it my duty to lay before this Society.

One point, however, of interest has already occurred, namely, that in a case of extra-uterine fœtation, on which I afterwards operated by gastrotomy, I was able to obtain very distinct tracings of the fœtal movements, and which I now place before you.

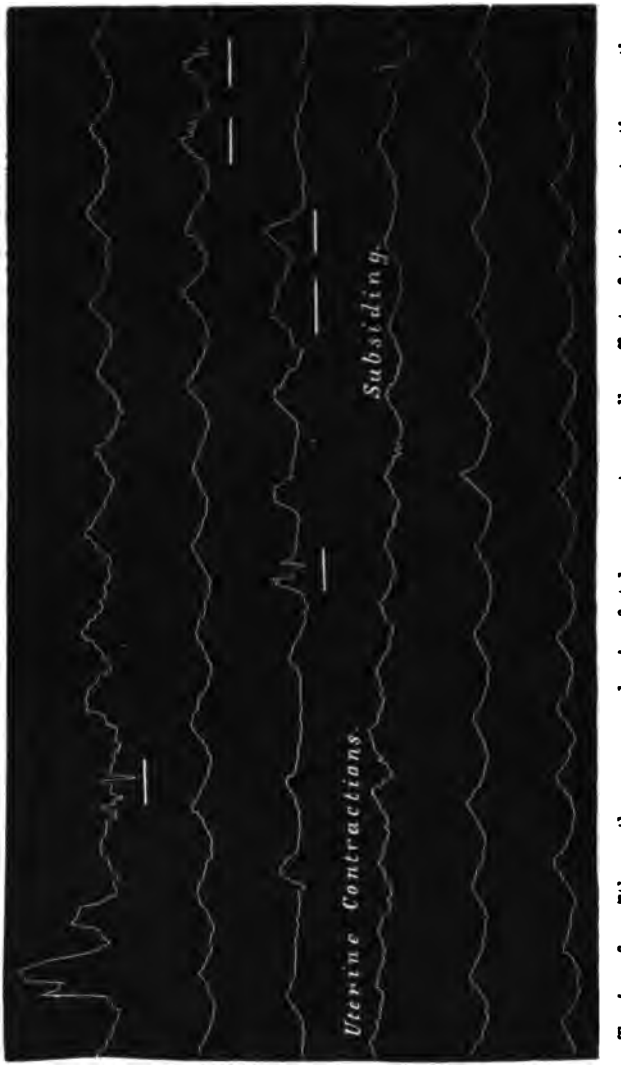
Dr. Edis remarked that one point alluded to by Dr. Hicks in his paper, viz. the voluntary movements of the fœtus from one position to another, was of great practical value in dealing with



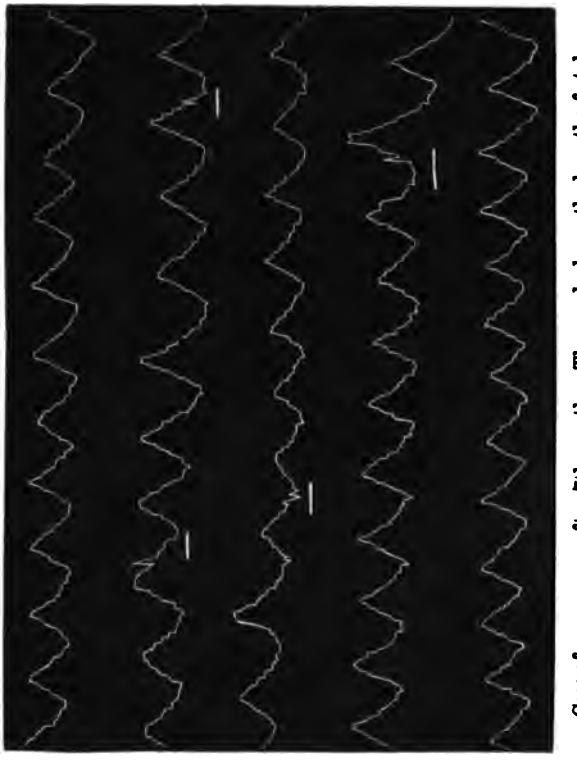
From case of extra-uterine fœtation at 7th month. Fœtal tracings indicated by horizontal marks beneath. The marks beneath show the fœtal movement.



From case of pregnancy, 7—8 months. The marks beneath show the fœtal movement.



Tracings from 7th month pregnancy, showing fœtal movements, as well as effects of uterine contractions on the respiratory wave. The marks beneath show the fœtal movement.



Case of pregnancy after 7th month. The marks beneath show the fœtal movements.

Readings from case 6½ months pregnancy. The marks beneath show the fœtal movements.

the question of version by external manipulation. In 1873, Dr. Edis had drawn attention to this subject in a paper recorded in the 14th vol. of the Society's 'Transactions.'

CASE OF EXTRA-UTERINE FŒTATION ABOUT THE SEVENTH MONTH OF PREGNANCY.—SUDDEN URGENT SYMPTOMS.—REMOVAL OF FŒTUS BY ABDOMINAL SECTION.—DEATH.

By J. Braxton Hicks, M.D., F.R.S., &c.
OBSTETRIC PHYSICIAN AND LECTURER AT GUY'S HOSPITAL; PRESIDENT OF HUNTERIAN SOCIETY; &c.

This case presents so many points of interest, that I have thought its description would not be unacceptable to the Society.

M. F—, æt. 29; married ten years. Has had two children, with natural labours, one seven years since, the other four years. No miscarriages.

In April, 1879, she was taken with severe vomiting and much pain in the abdomen, for which she was kept in bed for a month; when she got up she complained of increased pain, and said her "womb came down." In July she was admitted into Guy's Hospital, and she thought herself about six months' pregnant: the os uteri was low down, patulous, and elongated. A tumour was also felt low down in the uterus of the size of a small fist. Fœtal movements also were plainly felt through the abdominal wall. Dr. Galabin, under whose care she then was, made a careful examination under chloroform, and was able to make out the fact of pregnancy and the existence of the tumour. She went out before the exact nature of the case was made out, but returned in a month for something to be done for her relief.

This was in the first week of August. She fell under my care, in the absence of my colleague, complaining much of the tension of the lower abdomen, the falling of the womb,

which she said was worse, and also of difficulty in micturition. The abdomen had increased in size since she was in before, and I found a tense enlargement extending on the right side three inches from the median line up as high as the umbilicus, whence it rose nearly to the left ribs, towards the flank, and extended downwards, filling the whole left hypogastric region—not unlike the form of an enlarged spleen. It was dull throughout. However, it was plain immediately upon examination that a living fœtus existed within, more easily felt at the upper part than below. The movements I have been able to place on permanent record by the means of tracings taken by an instrument like the cardiograph (see page 136). A so-called "placental bruit" was heard over the centre of the abdomen, below the umbilicus. The fixed condition of the lower part, as well as the oblique form, showed me that the case was abnormal. This was more apparent by vaginal examination. I found the os and cervix and the posterior vaginal wall large, protruding through the vulva, the external os patulous, so that the finger could reach the internal os, which was closed. The parts about the roof of vagina were all consolidated together, and no movement of the various parts was possible; besides, it was difficult to make out the uterine body. Suspecting extra uterine fœtation, I carefully passed the sound into the uterus, and could not carry it up beyond the unimpregnated length. To make doubly sure, I had a sponge tent introduced; nothing was found within but some fragments of developed decidua. The case was now clear, and I waited to see her again. In the meantime she complained very much of uneasiness and tightness, difficulty of micturition, which had to be assisted by the catheter, with occasional vomiting. It often required the assistance of morphia to give her ease. She vomited after the first injection of morphia; but next time $\frac{1}{60}$th grain of sulphate of atropia was added, when no vomiting occurred. She was kept entirely in bed. She went on in this way for about a week, at the end of which period she was rather suddenly taken with increased pain and distension

of the lower abdomen, accompanied with much restlessness, so that the nurse had some difficulty to keep her in bed. The temperature rose to 100°, and the pulse to 120, p.m. Shortly after she fell into a state of collapse, the pulse rising to 140, p.m., and thready; the temperature natural; the respirations 34, p.m. There was cold sweat, she was blanched, and vomiting was severe. She said that while sitting by the side of the bed she felt something give way in her lower abdomen, upon which the fœtus kicked violently, and then she became faint, and shortly after the movements ceased entirely. The size and tension of the abdomen still increased, so that she was very desirous of sitting up to relieve the dyspnœa. I saw her about three hours after the occurrence of the very severe symptoms, she had somewhat rallied, but was in very great distress on account of the tightness, from which she earnestly begged to be relieved.

Seeing that evidently blood had been effused internally, and that she was in the most imminent danger, and that a possibility of arresting it might be found in abdominal section, I determined upon operating, and arrangements were made to that end, under the carbolic antiseptic method.

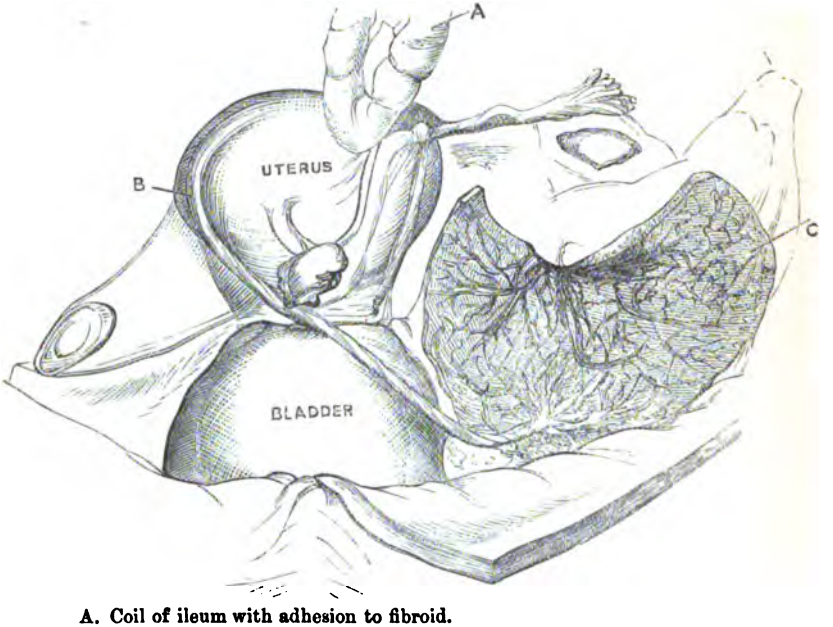
The usual opening was made in the median line below the umbilicus, where the swelling had now become most projecting. Upon dividing the peritoneum a large quantity of dark watery blood welled up; the finger was passed through the opening to explore; nothing could be felt but fine threads running backwards. It was evident that the placenta had been attached to the front abdominal walls, and that blood had been effused within the placental area, and that this had been the cause of the symptoms. This watery bloody fluid was therefore allowed to escape, and soon the finger reached the chorion. This then was broken through; liquor amnii flowed; the fœtus was reached and withdrawn (it was about the size of large six months' normal fœtus) without any signs of vitality. Not much blood flowed after this, but to stop any that might, a clean sponge was passed within the cavity, and kept applied to the inside of the

abdominal walls. After a few minutes all flow ceased, and the wound was closed, all but an opening about an inch and a half long. However, about this time she began to show signs of sinking, and she died shortly after.

The following is the report of the post-mortem examination:

In the upper part of the abdominal cavity the viscera

FIG. 1.



A. Coil of ileum with adhesion to fibroid.

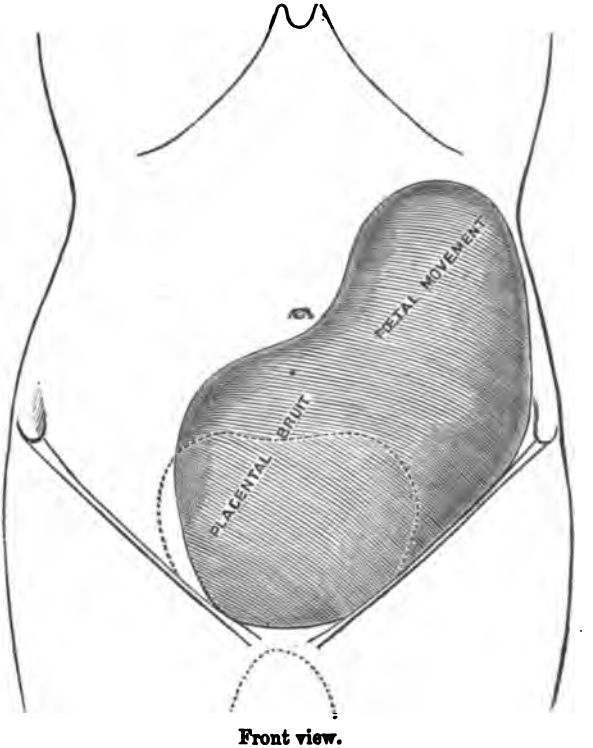
B. Right Fallopian tube crossing uterus and terminating on under surface of placenta.

C. Placenta shelled off abdominal wall; portion removed.

were free from adhesions and inflammation, but below the omentum was fixed downwards by adhesions and infiltrated with blood; a good deal of clotted blood was effused into all the tissues, which were strongly adherent to each other and the abdominal wall, the clots being evidently of some standing. As one passed downwards the coils of the small

intestines were empty and contracted to the left of the umbilicus and adherent to what proved to be the amnial sac, this was formed by a thin, smooth membrane, which passed from the right below up to the left in front of the kidney, so as to touch the transverse. Here the small intestines were

FIG. 2.



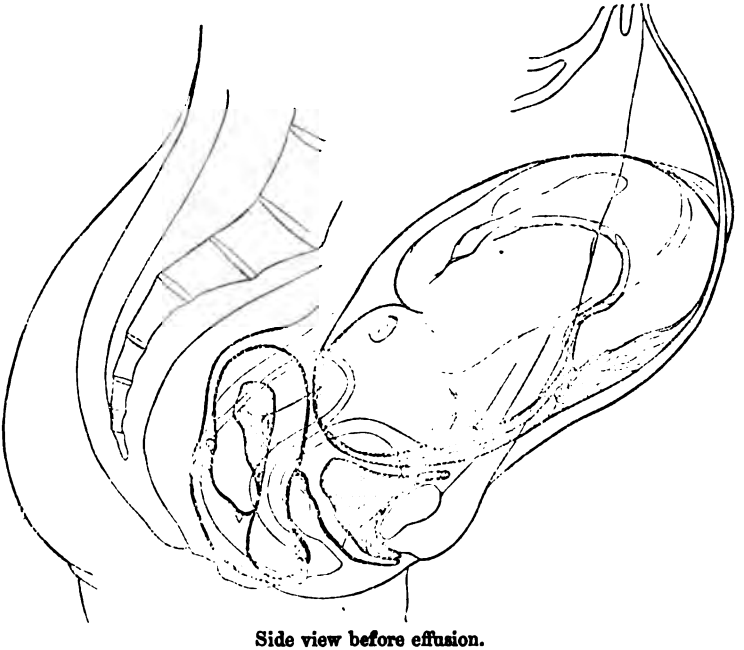
Front view.

in front of it, but lower down it was in contact with the abdominal wall, the lower part of the sac lay in the pelvis in front of the uterus and behind the bladder. The placenta was large, it could be shelled off without difficulty; it spread from below the left broad ligament about the peritoneum in that iliac region and up the abdominal wall almost to the umbilicus; it passed a little to the right of the

middle line on the parietes, was not attached to the uterus or bladder, but to a large amount of cellular tissue, which formed adhesions in every direction; large veins could be traced running from it over the parietal peritoneum, and from vascular adhesions which existed all round beneath its attachments.

The operator, in cutting through the parietal peritoneum,

FIG. 3.

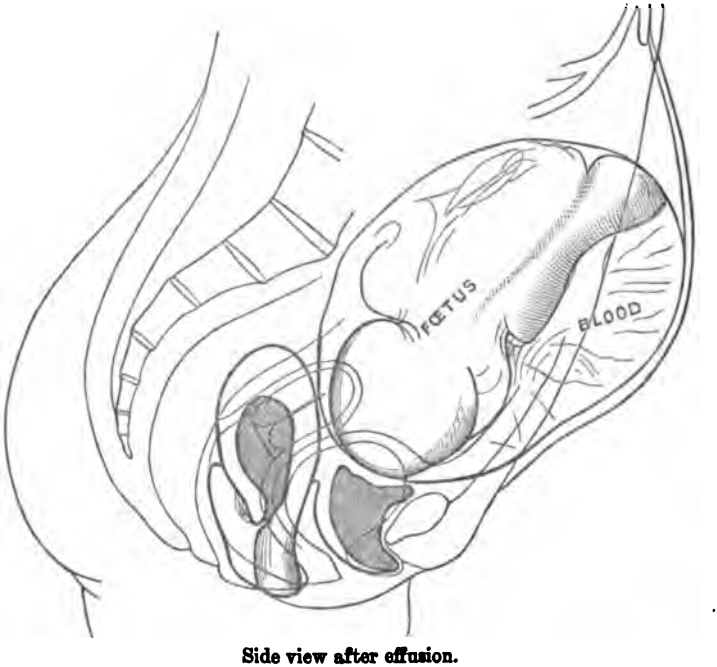


Side view before effusion.

had opened a large blood-filled cavity in the substance of the placenta; here a large portion of the placenta had been torn from the abdominal wall, blood being largely extravasated at the upper edge of the placenta. The detachment allowed the extravasated blood to flow into what remained of the peritoneal cavity and between the viscera. The opening through which the child was removed from the amnial sac was in the detached portion of the placenta.

The uterus was the size of a cricket ball, its walls much thickened and very soft; its cavity was empty, somewhat enlarged, and altered in shape. The organ in the pelvis was twisted on its axis, the anterior surface looking towards the left, its posterior surface was healthy and free from adhesions, but on the anterior surface, about midway between the

FIG. 4.



Side view after effusion.

fundus and uterine end of cervix, situated almost centrally, was a pedunculated fibroid tumour the size of a walnut, its pedicle a little over an inch long. The tumour was attached from its upper surface by a tough, fibrous cord, like a piece of whipcord, two inches long, to a coil of the ilium, by its lower surface it was attached to the right Fallopian tube. This latter was much increased in thickness, size of little finger; it lay firmly bound by adhesions against the side, and

then crossed over the anterior surface of the lower end of uterus; it was there attached to the fibroid. This tube was traced through much loose cellular tissue, passing under the placenta to the left of the bladder, almost to the abdominal wall; it was nine inches in length; it terminated in some loose tissue under the placenta, about two inches to left of middle line, lying, when the fœtus was *in situ*, close to ramus of left pubes. The right ovary was adherent to the amnial sac on its right extreme limit; it was large and was almost filled by a large corpus luteum; it was about an inch long.

The left ovary and Fallopian tube were healthy, the ovary small, neither of them adherent to the viscera; the thin membrane of the sac passed over them adherent on the anterior surface, but not showing inflammatory lesions.

The umbilical cord sprang from about the centre of the placenta at a spot two inches above symphisis and two to left of middle line.

The points of the case which seem to me interesting are the following:

1st. That it was the counterpart of concealed accidental hæmorrhage of normal pregnancy.

2nd. That it gives sufficiently clear evidence that the so-called ventral form of extra-uterine pregnancy is a reality. In other words, that the impregnated ovum can derive nourishment sufficient for growth from the surface of the peritoneum, which behaves under its stimulus much in the same way as does the fimbriated end of the Fallopian tube, or the tube itself, and except in the matter of decidua, as the uterine lining membrane.

3rd. It also raises an important question, namely, what is the best line of treatment supposing it happened that having elected to treat the case by abdominal section during the active growth of the extra-uterine fœtation, we found we had encountered the placenta in the position that it was situated in this case?

Of course the immediate bleeding would be much more severe than was met with in this case. It seems to me desir-

able to have some sort of rule to guide one, and I would like to hear the opinion of the Society.

I presume we shall agree that, without any hesitation, we ought to pierce the amnial cavity and remove the fœtus. This will simplify the subsequent treatment. But during the removal of the fœtus how may the bleeding be controlled? I would suggest that cold sponges introduced through the wound be held against the cut margins of the placenta by an assistant, with external counter-pressure.

When the fœtus is removed, and the blood allowed to flow out of the funis, what is the next step?

I presume it is agreed that we do not disturb the placenta.

We have then to deal with the neighbourhood of the incision, and the bleeding arising from the surfaces of the abdominal walls, where the placenta has been partly separated in the necessary manipulations. If bleeding do not stop by pressure, by cold sponges placed inside, and the walls externally pressed down on these, what is to be done? Every rough attempt to move is apt to be followed by detachment of villi, and thus fresh bleeding would ensue.

If the peritoneum be not exposed we can safely use the solutions of iron, and possibly the actual cautery.

With these methods cold, pressure, iron solutions, or cautery, is it not probable that the bleeding would be arrested? Indeed, in any case as time elapsed, the previous activity in the vascular system of the part would lessen, and the hæmorrhage tend to diminish; and as the wound will not be immediately closed, and as the placenta will be left to break up, rigid antiseptic treatment is impossible, therefore the retention within of the sponges, previously carbolized, with a firm compress externally for some hours, would be an additional security.

4th. The length and position of the right Fallopian tube and ovary is worthy of note, and the curious position held by the small pendulous fibroid, adherent on one hand to the right Fallopian tube, and on the other by an old elongated adhesion to the intestine. The close contact of the ends of the tube and ovary to the ovum might argue in favour of

tube-ovarian pregnancy, but although this might have been the state in the commencement, yet it is apparent that the chorion villi in the main depended on the attachment to the peritoneum for its supply as the growth advanced. It shows that the structures supposed to exist in the intra-uterine placenta is not an absolute necessity for the growth of the fœtus.

Finally, the other point of interest is the having been able to record by a tracing the fœtal movements, in like manner as I have showed in the former communication we can record the movements of an intra-uterine fœtus.

I must add I am indebted much to my intelligent and active Obstetric Resident, Mr. Thos. Pedley, for much assistance in the treatment and reporting of this case.

Dr. WILTSHIRE said several important points were raised by Dr. Hicks's interesting paper. He would touch upon two of the most important. First, as to the occurrence of the peritoneal form of extra-uterine pregnancy. He thought no one acquainted with the subject could doubt that this occurred, and he instanced a case of Kœberles', in which peritoneal pregnancy ensued after the ablation of an inverted uterus, the ovaries being left, and the serum acquiring access to the ovule through a fistulous opening at the top of the vagina; and another, in which the root of the vagina was ruptured by forcible coitus. He thought Mr. Jessop's remarkable case also illustrated this view. Dr. Wiltshire held that mucous membrane was not necessary for the growth of a fertilised ovum, and he believed that the ovule, after fertilisation, had a parasitic power of growth, stimulating the surfaces to which it attached itself to increased vascular development. It could, therefore, well undergo development in the maternal peritoneum, and he believed it might do so even in the male peritoneal cavity, were its removal thereto after fertilisation possible without loss of its vitality. Dr. Wiltshire mentioned a case which had occurred in his own practice which resembled Dr. Hicks's. The other point upon which Dr. Wiltshire dwelt was that of the treatment of the placenta, and he said that although he would strongly advocate the plan of leaving the placenta untouched, yet he thought that in Dr. Hicks's case, as the incision had been right into the placenta, and as a large amount of separation between it and the abdominal wall had taken place, with so much hæmorrhage, it might have been justifiable to remove the remainder; and, if there were much hæmorrhage, to have brought the internal aspect of the abdominal parietes together by deep

sutures or pins. Still, the rule was good not to remove the placenta; exceptions, however, must be admitted.

Dr. ROUTH, after a few remarks on the value of Dr. Hicks's paper, backed as it was by vast experience, yet thought he must differ from him in one or two particulars:—1st. Why not have endeavoured by auscultation to make out the exact position of the placenta? If he had done so, *perhaps* he might have avoided cutting down in the median line and so wounding it. With our present knowledge of abdominal surgery it was in no way necessary to cut in the median line, but the incision might have been on either side. The present appliances to arrest hæmorrhage from sections of a large vessel were so complete that no fear need have been entertained on this score, and so he might have avoided the hæmorrhage from wounding of the placenta altogether. 2nd. Why perform gastrotomy at all? Why not have contented himself with injecting morphia into the amnion, or drawing out the amniotic fluid with an aspirator, and so killing the child? It appeared that it was owing to the active movements of the child that so much pain was endured, and that a portion of the placenta was separated. Now, the records of obstetric medicine proved that the death of the child might have been readily effected by injection of an opiate, and another result was in such cases that both the placenta and child withered away and were absorbed, and possibly the bones would have been given out at a later period in the contents of an abscess, or could have been removed, as in a case shown this very night, and the patient's life saved. In reply to the President, Dr. Routh said that two drops of laudanum administered had, as he had seen, killed a new-born child, but as much as a quarter to half a grain of morphia could have been injected into the amniotic sac without detriment to the mother, and would have certainly ensured the death of the child.

Dr. GERVIS said Dr. Routh's remarks opened up the entire question as to the alternative of primary gastrotomy in extra-uterine fœtation. It was doubtful whether as yet sufficient data were collected for a positive decision, but every additional case was valuable. Some eighteen months ago he had had a case resembling, in some of its symptoms and in the abdominal position of the child, the one narrated by Dr. Hicks, and in which, on account of the pain, sickness, and exhaustion of the patient, primary gastrotomy was decided upon. In the operation not much difficulty was met with, and but trifling hæmorrhage, the position of the placenta being mostly in the pelvis and below the level of the abdominal incision, but the patient died in about three days as the result of a continuous hæmorrhagic loss through the drainage-tube, which set in the day after the operation. The examination after death revealed no indications of peritonitis, but

more or less separation of the placental margins. A very important point, therefore, for consideration was whether, leaving the placenta *in situ*, any treatment could be applied to it which would lessen this danger. Had it not been for the consolidation of the vaginal roof, to which Dr. Hicks referred, it might in his and in any similar case, in which there was reason to believe the placenta was behind the proposed line of abdominal incision, be well to try and get at the fœtus through the vagina.

The PRESIDENT was surprised to hear Dr. Hicks say that perfect antiseptic treatment was impossible, and thought that the chief hope of progress in such cases lay in carrying it out completely, however difficult it might be.

Dr. JOHN WILLIAMS thought that the insertion of a tent into the cervix was superfluous for diagnosis, and that it possibly had something to do with the sudden accession of severe symptoms.

Dr. EDIS called attention to a valuable monograph on 'Extra-uterine Gestation,' by the late Dr. John S. Parry, of Philadelphia. He therein says :—"Of the true value of narcotic injections into the cyst we can say nothing. The facts in our possesion are not enough to make any deductions valuable." In reference to tapping the cyst and drawing off the liquor amnii, he states :—"All measures that necessitate wounding the cyst without removing the child are not without danger to the woman." "The facts now in our possession indicate that the child ought to be either removed entire, or the cyst be allowed to remain uninjured."

Dr. BARNES was inclined to think that the present might be reckoned among a few exceptional cases, in which removal of the placenta might be justifiable, the hæmorrhage being afterwards stopped by compressing the abdominal walls together.

In answer, Dr. BRAXTON HICKS said that most of the speakers had mistaken the state of the case, which was this, that, having diagnosed certainly the case, and while he was waiting for a short time to consider the best line of treatment, the urgent symptoms suddenly came on. Then the enlargement and tension in front was so great that it seemed to obliterate the previous outline. Dr. Hicks, therefore, incised the median line as most simple ; and after all it may be a matter for discussion whether the cutting into the placental site, in such a case as this was so very disadvantageous, because he differed from Dr. Routh as regards the conclusion one might arrive at from the violent saltation of the fœtus. This he would and did consider as evidence of impending death of the fœtus from asphyxia, and the risk from incising the placental site not so great. In any case, though the existence of a bruit was heard on the left side of the median line, Dr. Hicks would not take that as a conclusive proof of the position of the placenta, at least, so far as to make him alter the place of incision

if other circumstances pointed to the middle line as best. As a matter of fact, no recent blood was lost during the operation, only that previously effused. But the point upon which he was desirous of the opinion of the Society was, What line of management should be followed provided the placenta was cut into, the fœtus being alive? With regard to the removal of the placenta in such a case as the one narrated, he could not agree with Dr. Barnes that it would be safe from hæmorrhage, as it was attached deep down towards the pelvis, and should oozing occur it would be difficult to reach. Besides, in this case we should appose the peritoneal cavity, which would add to the risk, for in any case he thought, contrary to the opinion of the President, that in the very frequent manipulation of a case such as this, the antiseptic treatment would be exceedingly difficult to carry out, so as to be at all times complete, though he would not deny it could be under extremely advantageous circumstances.

A paper by Dr. Fulcher, communicated by Dr. Godson, was then read, on "Two Cases of Extra-Uterine Fœtation."

Drs. Edis and Routh made remarks.

JUNE 2ND, 1880.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—46 Fellows and 2 visitors.

Books were presented by Dr. Paul Mundé and Dr. A. D. Sinclair.

Robert Bruce, M.R.C.S., was admitted a Fellow of the Society, and the following gentlemen were declared admitted:—John Blount Fry, M.R.C.S. (Swindon); Oscar Dunscombe Honiball, M.D. (Demerara); John S. Harvey, M.R.C.S. (Boulogne); and Robert Peel, M.R.C.S. (Melbourne).

The following gentlemen were proposed for election:—Samuel Nall, M.R.C.S.; William Outhwaite, M.R.C.S.; Charles James Sutherland, L.R.C.P. Ed. (South Shields); and Julius John Eardley Wilmot, M.D. (Weston-super-Mare).

TWIN MONSTER.

DR. CHALMERS showed for Dr. M'Laurin a twin monster in its seventh month. There was but one head; the face looking laterally; the mouth leading into two throats. The necks and the bodies, which were both female and well formed with limbs complete for each, were united in front by the integuments as low down as the umbilicus, which was common. The mother had had one child previously which

was normal, and she could not attribute to any cause the present unnatural pregnancy. The child presented by the feet, and offered some difficulty to the medical attendant from his believing he had two bodies to deal with. After trying ineffectually first to push back one pair of legs and then to bring the other pair in advance, he left the process to nature with a satisfactory and not tedious result.

RETROFLEXED UTERUS.

Dr. Champneys showed a specimen of retroflexed uterus, the uterine wall on concave side of curve being much the thickest.

Dr. Graily Hewitt believed that the discrepancy of opinion expressed at various times as to the presence of undue thickness or thinness of the uterine wall at the concave side of the bend was probably due to the circumstance that during the early stage of this affection undue thickening occurred or might do so, whereas in the later stages atrophy and undue thinning of the wall occurred. This explanation was borne out by facts he had observed.

PATHOLOGICAL ANATOMY OF EROSIONS OF THE CERVIX UTERI.

Dr. Galabin showed microscopic sections illustrating two totally different forms of erosion of the cervix uteri. He said that recent histological observations tended to overthrow the old view that the epithelium was always thrown off in such cases, and that the villous prominences were due to hypertrophy of the denuded papilla. Ruge and Veit had contended that a single layer of apparently cylindrical epithelium always remained, while other more recent observers

had found erosions actually denuded of epithelium. The two specimens shown had been removed during life, and therefore there was no question of post-mortem loss of epithelium. In one the erosion was founded by intact squamous epithelium on the side nearest the os, as well as on the opposite. Both the horny and Malpighian layers of epithelium became gradually thinner until they disappeared, and the normal papilla had entirely disappeared at this part. The eroded spot was elevated above the surrounding surface destitute of epithelium, and covered with a *débris* of cells like the surface of an ulcer. It consisted of a tissue full of vessels, and approximatives to the character of embryonic tissue, like that seen in granulations. This case, therefore, closely approximated to a healing ulcer. Near the spot of erosion were numerous adventitious glands in course of formation by ingrowth of the deepest layer of squamous epithelium. The second specimen was taken from a case of bilateral laceration of the cervix with ectropion, which had presented the appearance of a villous erosion. This case corresponded precisely to the description given by Ruge and Veit. The surface was very irregular, but everywhere covered by a single layer of cylindrical epithelium. Although taken at a point which must have been originally covered by squamous epithelium, it resembled the surface of the interior of the cervical canal, except that the villous elevations were greater. The cylindrical passed by a sudden transition into the squamous epithelium. He believed that in all cases of erosion the normal papillæ were cast off, and not hypertrophied.

LARGE HYDRENCEPHALOCELE.

Dr. Cleveland exhibited a female child, born at term, the subject of a large hydrencephalocele, that had occurred in the practice of Mr. G. S. Walker, of Kilburn.

Mrs. S—, æt. 42, had borne four healthy and well-formed children. About a fortnight after quickening in this her fifth pregnancy she sustained a severe mental shock, and soon after experienced weight and pressure at the lower part of the abdomen, which went on increasing up to the end of pregnancy, so that for some time before the birth of the child she had great difficulty in assuming the erect position.

Slight labour pains occurred on the 10th of May, but it was not until a fortnight afterwards Mr. Walker was summoned, when, on making an examination, the membranes ruptured, and he found the tumour, which puzzled him not a little as to its nature, presenting. The head, however, followed without delay, and there was nothing abnormal observed in respect to the placenta. The child lived forty-four hours. It took no nourisment.

When seen by Dr. Cleveland a few hours before death the breathing was rather heavy, and it seemed to be sinking more from inanition than any other cause. Compression of the tumour produced no marked effect. The appearances presented are as follows:

The child is small, but, with the exception of the head, well formed. The forehead is narrow and very retreating. The anterior portions of the parietal bones can be felt, but the occipital bone seems to be entirely wanting. The tumour, which is covered with a ring of hair at its attachment to the skull, is about the size of a large cocoa nut and somewhat pear shaped. On lifting it the impression is like that produced by a bladder of water, although towards its root there is a feeling as of semi-solid contents, or brain substance.

Around the tumour the vertical measurement is 14 inches, while horizontally it is 13 inches. Depth of tumour 5 inches. Width 3½ inches. Girth at root 8½ inches.

FIBRO-CYSTIC DISEASE OF THE UTERUS.

Dr. Thomas Chambers showed a specimen of what, before its removal by abdominal section, was diagnosed to be fibro-cystic disease of the uterus. The tumour which comprised the uterus and both ovaries had been removed—antiseptically—only a few hours. It weighed ten pounds. The operation was not a difficult one, though both time and care were necessary. The incision was twelve inches. This was absolutely necessary on account of the large spherical size of the tumour, which did not admit of reduction by puncture. The broad ligaments were transfixed close to the uterine neck and tied below the ovaries. The whole cervix was then embraced in the operator's powerful parallel clamp, and the body of the uterus removed at its junction with the cervix. One very large artery, which travelled the soft tissues at the left side of the hardened cervix, required ligature. This could not be sufficiently compressed by the clamp because of its lateral position, and the great density of the cervix, which was transfixed and tied on either side *below* the ligatures embracing the broad ligaments. The loss of arterial blood did not exceed two ounces; but there was a great weight of blood in the tumour which drained away after its separation. As the specimen was not a common one, and as the exact nature of the disease was not clear, he asked that a committee might be appointed to examine and report upon it at the next meeting, when he would furnish notes of the case that they might be discussed together.

Dr. Bantock said he had listened with interest to Dr. Chamber's account of the trouble he had had with the pedicle, for the action of the clamp was just what he anticipated as the result of his own experience. When any portion of the uterus went to form the pedicle the parallel blades of the clamp encountered a thick, firm, and very resistent body in the middle, with a much smaller amount of tissue on either side, and that of

a very compressible kind, containing numerous blood vessels. The thick median portion protected the lateral portions from pressure, and the invariable result would be that as soon as the tumour was cut away, free bleeding would be found to take place from one side or the other. This was what actually happened. Hence some form of circular pressure was absolutely necessary. In his first case the bleeding appeared to be perfectly controlled by ligatures, but the peculiar nature of the uterine tissues caused them to give way before the force of the ligature, and some oozing took place from the stump. The post-mortem examination of the uterus showed that the force had in the first instance reached the deepest part of the uterine tissues, for the mucous membrane presented a distinct line of slight ulceration. Yet a No. 6 or 8 catheter could be passed easily along the canal. He was inclined, from his experience, to recommend Koeberle's serre-nœud, as the constricting force could be applied gently at first and then increased from day to day as required.

TWO CASES OF EXTRA-UTERINE FŒTATION, WITH RESULTS.

By Charles H. Carter, B.A., M.D. (Lond.) M.R.C.P.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO SQUARE.

Case 1.—*Extra-uterine fœtation (abdominal); death of fœtus about term; suppuration of cyst; removal of fœtus; recovery.*

On January 13th, 1880, M. B—, æt. 38, was admitted into the hospital under my care, being sent in as an urgent case of extra-uterine fœtation by Mr. Hudson, who had lately been in attendance upon her. On admission the patient was in a very critical state, the temperature high, the pulse quick, 150 and small; tongue dry, brown, deeply fissured; lips cracked, and sordes on them; nostrils drawn up, pinched-looking; respiration completely thoracic; the abdomen distended, and so tender as scarcely to bear examination. On light percussion, everywhere resonant, to within three inches of the left groin; on deeper percussion, dulness extended to

within one inch of umbilicus, and a distinct tumour made out occupying the hypogastric and left iliac regions, reaching up to the umbilicus and extending across the mid line to the right about two inches; fluctuation was distinctly felt deep down. By vaginal examination the uterus was pushed downwards and forwards; behind the uterus a soft doughy mass was felt filling the Douglas pouch and continuous with the abdominal tumour. She was ordered to be kept as quiet as possible, the abdomen lightly poulticed, and champagne, milk, and Brand's essence given. After a few days the following history was obtained:—She had been married fourteen years; had had one child thirteen years ago; no miscarriage. She had been regular till December, 1878, when she ceased, and supposed she was pregnant. She went on well till April 13th, 1879, when she had difficulty in micturition and was unable to pass water. She applied at St. Bartholomew's Hospital and was relieved, four pints of water being drawn off; also on the 15th, and on the 16th. She was admitted an in-patient, and through the kindness of Dr. Matthews Duncan, under whose care she came, I am enabled to give the note that was then made of her condition. "The cervix was lying adjacent to the symphysis pubis, the finger could be passed easily between them; behind the cervix the pelvis is nearly occupied by a tender irregular elastic mass, the retroverted pregnant uterus. An attempt to reduce it was unsuccessful. Two or three attempts made with an air ball in the rectum were likewise without success." The patient left the hospital May 9th, passing her water pretty freely, and went home and was able to do her work as before. In June she noticed that the lower part of the abdomen was swelling. She felt movements in the abdomen which continued up till the end of August, about which time she passed a large mass by the vagina, and applied again at St. Bartholomew's Hospital and was admitted a second time in September. The case was seen by Dr. Godson in the out-patient room, and the fœtal heart was heard distinctly a hand's breadth below the umbilicus. Through the kindness of Dr. Matthews Duncan I am again able to give the notes

that were then made of her state. "September 2nd, the patient complains of the womb coming down and a great discharge from it, the prolapse recent; no pain when the womb is down; micturition is difficult. The circumference of abdomen at umbilicus thirty-one inches; distance of iliac crests from umbilicus the same, six and a half inches; from symphysis pubis to umbilicus seven inches. The belly prominent, more on the left than on the right lower half; above horizontal ramus of right pubic bone, dulness rises halfway to umbilicus and around it hardness; to the left of this, the dulness continues to rise on the left side to the level of the umbilicus; over all the left side a film of fluid, except high up, where at the level of umbilicus nodulated hardness is felt resembling the limbs of a fœtus. She says she has felt no feeling of movement in the tumour since she entered the ward. To auscultation the tumour is dumb. *Vaginal examination.*—The cervix uteri much enlarged, easily admitting the finger, probably through the internal os; is adpressed to the symphysis. The probe enters easily and pierces into the above described hardness. External palpation gives the impression of there being only a moderate thickness between the skin and the point of the probe, not as if there were even the thickness of the abdominal walls plus that of an ordinary unimpregnated uterus intervening. Probe enters six inches and is withdrawn without any trace of blood. Behind the cervix is a rounded hard swelling possibly a fœtal part, between this and the left abdominal hardness mutual impulse can be felt. Milk in the breasts. The patient left St. Bartholomew's September 28th against advice." Between April and December, 1879, she menstruated, but not at the proper times, the intervals being seven or eight weeks. After leaving St. Bartholomew's she was well up to about Christmas, a fortnight before her admission under my care, when she was seized with a pain in the swelling, very sharp and stabbing; this has continued, and has been so severe that she could not sleep. She does not think the swelling is any larger than it was in June last.

For the next few days after admission the patient continued

in much the same condition, the pulse small, 150; the temperature high, running up, on the evening of the 17th, to 103·4°, the pain being very severe, and the tenderness and distension of the abdomen continuing. On the 20th my attention was called to a redness the size of a florin, about one inch to the right of the umbilicus, and on a level with it. On the next day this was more marked and the area a little raised, and the poultices were made smaller, so as to cover the area and the parts adjacent; the puffiness increased, and by the 26th there was a large prominent swelling like a hen's egg to the right of the umbilicus. This I opened by an incision about one inch in length, and let out about three or four ounces of horribly offensive, dirty-looking purulent fluid, containing *débris*, curdy matter, &c. After washing out with carbolic-acid lotion I passed in the finger, which could be moved round in a cavity of about two inches radius, and it was clear I had only opened an abscess between the skin and the abdominal muscles; no opening from it could be made out, and no fœtal parts felt. The patient still remained in the same low state, the temperature and pulse much as before, and the stools usually three times a day; the tongue dry, brown, cracked; the breath and general condition most characteristic of septic poisoning. The discharge from the opening continued for several days, the cavity being washed out frequently with carbolic lotion. On February 4th the patient appeared much improved, the discharge was less, and the incision contracting. Whilst syringing on the 7th bubbles of gas were noticed, and, on a more careful examination and probing, an opening was found at the left lower angle of the cavity, through which a large probe could be passed about two inches, and the dirty-looking purulent matter welled up more freely from below. On vaginal examination there appeared less fulness in the Douglas pouch. On February 12th, at my morning visit, finding the patient had passed a better night, and was somewhat stronger, I made a more careful examination, and passing the probe as before, it grated against what appeared to be rough bone. I then cut downwards through the skin for about one inch the

full extent of the cavity before opened, and found the opening through which the probe passed. This aperture was slightly enlarged by a nick of the scalpel, and the little finger, guided by the probe, distended the opening, and passed into a cavity, and the fœtal skull was felt. As this gave the patient a good deal of pain a little ether was administered, and the opening into the fœtal cyst was enlarged by cutting downwards towards the middle line, through the whole thickness of the cyst and abdominal walls for about three inches; this being done, the head of the fœtus was exposed, the vertex presenting; the overlapping edge of one of the parietal bones was seized with a vulsellum, but the bone came away from its attachments; the other was then seized, and it too came away; the dura mater was then grasped by the forceps, and the fœtus easily extracted, the greater part of the brains being squeezed out as the head passed through the opening. The fœtus was decomposed and horribly offensive. The placenta did not come away with the fœtus; about three inches of the cord was hanging from the umbilicus. No search was made for the placenta; the cavity was washed out with carbolic lotion. On examining the opening made it was evident that the abscess first opened had been formed through the purulent contents of the cyst working its way by a small opening, at its extreme upper margin, through the abdominal muscular and peritoneal layers, to which the cyst wall had become adherent, and that the incision laying open the cyst had been made through the abdominal and cyst walls, which were adherent for the greater part of its length, but at the lower part the cyst wall was not adherent, and the finger could be passed for about two inches between the cyst wall and the peritoneum, a few soft adhesions only being felt here and there; this non-adherent part of the cyst wall was stitched to the abdominal wall by two sutures. The cavity was stuffed with two rolls of oakum covered with lint, each about four inches long and two in circumference. They were removed in the afternoon, and the cavity washed out with carbolic lotion; this was repeated in the evening, the discharge being horribly offensive, brownish purulent matter,

with much *débris* and curdy, caseous matter. The fœtus was a male, macerated, decomposed, cranial bones loose, about eight months old, measuring twelve inches.

For the next three days the discharge was very offensive, dirty brown, with broken-down matter in it; the cavity was syringed out twice a day with carbolic lotion and stuffed with lint. The patient's condition improved; the temperature and pulse kept high. On February 18th the discharge looked healthier, still very offensive, the two abdominal sutures removed, and the cyst wall was adherent to the abdominal wall all round. Patient put on Calcii Sulphide, gr. ½ 4tis horis. On the 20th the patient was much better, the discharge less offensive and becoming green, and more like healthy pus. On the 23rd a large quantity of purulent matter was passed per vaginam, and on syringing the cavity the lotion passed in the same way. On the 25th the wound looked healthy, the upper part, the base of the abscess cavity, skinning over. The patient gained strength, eating well, tongue clean and moist. The cavity is contracting, holding about two ounces, and the area of abdominal resonance enlarging. On the 28th the temperature was high, and some pus was found exuding from a small opening between the cyst and abdominal wall; the wound is healed over and the cavity diminishing. There has been a little discharge from time to time from the vagina. On March 12th the upper part of incision skinned over: the cavity holds two to three drachms; a small mop can be pushed down about three inches to the bottom of the cavity. Patient gaining flesh, though still very emaciated. The temperature 100° at night; pulse 112. By vaginal examination, the uterus fixed in fair position; a thickening felt in the Douglas pouch. On March 25th the opening into the cavity was the size of a threepenny-piece; the cavity is still washed out daily, but holds scarcely a drachm. April 10th.—The cavity is quite filled in, and the opening closed. Patient allowed to be up, lying on the couch. 17th.—Patient gaining strength; still very weak, walking about a little. The vaginal examination gave the uterus lying central, somewhat enlarged; sound

passed forwards three inches; the thickening in the Douglas pouch still to be recognised, and, now that the uterus is fairly movable, a band of adhesions is felt passing from the posterior wall of vagina to the uterus. Patient to leave the hospital as soon as she is stronger on her legs and admissible to a convalescent home.

CASE 2.—*Extra-uterine fœtation (abdominal); death of fœtus after the sixth month; suppuration of cyst six years after, and discharge of fœtal bones per rectum; recovery.*—In July, 1879, E. P—, æt. 34, married sixteen years, applied as an out-patient at the Hospital for Women, and was seen by Dr. Holland. She said she had had an abdominal tumour for three years which had gradually increased. She suffered great pain in it of a shooting character. The uterus was fixed by what appeared cellulitic deposit and extended round the uterus, and was connected with a mass felt externally in the left hypogastric and iliac regions. A fortnight later she complained of shiverings, the temperature was high, and pulse 140. She was admitted into the Hospital, under my care, July 31. She then gave the following history:—She had been married sixteen years, and had had one child, born fourteen years ago. She had been well till three years ago, when she felt something moving in her inside just as if she were pregnant. A doctor treated her for pregnancy; then she had a greenish discharge, offensive, for three months. She had been regular all this time, but scanty and painful. Three months ago pain began in the swelling, retching, and cold shivers. She thought the swelling in the left side was smaller. The day after admission menstruation occurred, and on August 5th the following note was made:—The uterus is enlarged, displaced somewhat to the right; the left side of pelvis fuller than the right; the uterus is fixed by a belt of deposit round the cervix in front and behind. A tumour fills the left hypogastric and iliac regions, reaching up to a line about an inch above the iliac crest, the swelling not clearly defined and no fluctuation to be made out in it; bimanually the fulness in the left side of the pelvis is con-

nected with that in the left iliac region. The swelling was hard and not at all clearly defined by vaginal examination, and I came to the conclusion that it was a case of pelvic cellulitis tending to suppuration. The temperature kept high for three or four weeks, as did also the pulse; then it fell, and varied from 98·4° to 100°, and looseness of the bowels set in, being moved three or four times daily; the stools offensive, but nothing else noticed. The abdomen was poulticed and anodynes given, with the usual treatment for pelvic cellulitis. The catamenia returned at the month, and after it was over the patient improved in general health, and the swelling was less both to abdominal and vaginal examination, and I thought it well to send her out, hoping the change would still further strengthen her. She left the hospital October 8th. In December Mr. William Harle wrote me saying he was attending a poor patient who had for a time been in the hospital under my care, and that she had lately passed five or six small fœtal bones, and asked me if I would receive her back as she was very ill and needed attention and nursing. She re-entered the hospital December 27th, 1879, and then gave the following and somewhat different history to that first stated:—She had enjoyed excellent health till six years ago; at that time she believed she was pregnant, and all went on well till she supposed she was six months' gone; during this time she noticed nothing more as to herself than that she was more sick than during her first pregnancy; she had no pain or other discomfort. When six months' pregnant she exerted herself very much in lifting a heavy ladder. Whilst doing so she was seized with a forcing pain in the womb and the lower part of the back. On the following day she had a discharge like black blood from the vagina, which lasted two days. A week after a greenish-yellow, thick, offensive discharge set in, which went on for three months. After this she improved in health till two years ago, when she was taken with a severe pain in the lower part of the back, and was confined to her bed for a fortnight. She then remained well till six months ago, when she had shiverings, was feverish, &c., and

had more or less constantly to keep her bed, and was for two months, as stated above, in the hospital. After leaving the hospital in October the looseness of the bowels continued, and about the end of October she passed, per rectum, a fœtal bone, and since then has been passing them at intervals. On vaginal examination the uterus was not absolutely fixed, lying almost central, drawn a little to the right. No distinct tumour could be made out, but a thickening and fulness of the left lateral cul-de-sac, which extended upwards, and could be felt in the left iliac region, but not reaching above the iliac crest. By rectal examination no opening could be detected through which the bones came. There was a considerable amount of pain before a bone was passed, and its passage set up a great deal of irritation in the rectum, which required the patient to be kept under the influence of morphia. From this time till March 1st she passed a large number of bones. These have been arranged and put up by Dr. Gabbett, the pathologist to the Hospital, so as to reconstitute the skeleton as far as is possible; many bones are still wanting. The patient was kept in bed during the month of March, as she still suffered a great deal from pain, and during this time the swelling in the left iliac region lessened. No more bones were passed. She was allowed to be up and about the ward in April, and on the 16th was sent to a convalescent home, her health only partially restored, unable to bear much fatigue, and having a very worn and weary aspect. The uterus was lying nearly central, not quite fixed; there was a thickening to be felt in the left side of the uterus, but nothing large enough to be detected bimanually. The cervix uteri was large, the os contracted; the sound passed one and a half inch and then caused so much pain that it was thought well not to pass it further; the uterus was lying forwards.

The patient was readmitted to the hospital May 11th having been suffering for some days previously from very severe pain, due, as she thought, to some large bone being unable to pass; about five weeks before this she had passed the one half of the lower jaw. On admission, by rectal

examination the sharp, serrated edge of one of the flat bones of the cranium was found projecting into the rectum about three inches from the anus; about as much as one third of a crown piece projected free into the bowel, and the rest was firmly embedded in the tissue around; behind it a second flat bone could be felt lying against it. The patient was kept in bed for a few days to see if any change would occur in the position of the bones; they were a little more pushed down, but it was evident that they were too large and too firmly wedged in to be removed as they were, and that any attempt to remove them entire would do great mischief, as the sharp edges when drawn upon would cut through any intervening tissue like a saw. I decided to cut them through with a pair of bone nippers, and on the 19th ether was administered, and the first projecting bone was cut across and removed, and then the second, and removed in pieces; the finger then passed further into the cavity and a rib was withdrawn, and then another flat bone was reached, one of the halves of the frontal bone; the orbital part was detached and the flat portion broken across with the nippers and withdrawn; then a fourth flat bone was reached and removed in many pieces, as is shown in the preparation. The patient was under ether an hour and a half, and the operation was continued until all the bone that could be reached was removed. The patient had no bad symptom after the operation. During the time a small quantity of blood was lost, due to the manipulation and the straining of the patient involuntarily, forcing the sharp edges of the fragments against the cyst wall and the mucous membrane of the bowel. The patient has been up in the ward since the 26th, and has been gaining strength daily; no more bones have been passed. On June 2nd, by rectal examination, no opening could be discovered into the cyst, and it is to be hoped that now all the bones have been passed, and that the patient is convalescent.

I have reported these two cases of extra-uterine fœtation as instances of the abdominal variety, using this term to embrace all those varieties as are described under the names

of ovarian, tubo-ovarian, abdominal, &c. From the clinical history of the cases it would appear that in neither was the ovum ever in one of the tubes, so that the pregnancy began as tubal, and later on through rupture of the tube the fœtus passed into the abdominal cavity; in neither is there any account of pain or disturbance during the first three months of pregnancy, nor about that time when in the tubal variety rupture of the tube, and all its terrible results occur.

The cases illustrate one of the modes in which this form of extra-uterine pregnancy ends, viz. by suppuration in the cyst and the discharge of the purulent contents, in the one case through the rectum and in the other through the abdominal walls; and in neither case did I do more than watch the patient, and aid, when the proper moment came, this spontaneous attempt at recovery. Could I have discovered the opening in the bowel through which in the second case the bones were passing, it is quite possible I might have hastened the convalescence of the patient by dilating it or by removing some of the bones. Comparing the result in the two cases, I am struck with the rapid convalescence of the one in whom the fœtus was removed entire by abdominal section, though suffering profoundly and acutely from hectic fever through absorption of septic materials, and reduced almost to a skeleton when first seen, yet as soon as all was removed, the system responding, she began to gain strength and flesh; whilst in the other where the bones passed per rectum, for many months she has been, and is still, suffering from the slow absorption of septic materials, which has greatly undermined her constitution. And I draw this conclusion, that when in an extra-uterine fœtation the fœtus is dead, or that it has passed beyond the full term, and symptoms of constitutional disturbance arise, such as occurred in the cases reported, it is advisable not to delay interfering but to make attempts to remove the fœtus, either at once by abdominal section, or to aid the natural mode when it has begun; and I think I should have been justified in my second case (had I rightly diagnosed her state when first

she came under my care), if not in at once proceeding to perform abdominal section, yet in endeavouring to produce adhesion of the cyst to the abdominal wall, and in that way opening up a way of escape for the fœtal contents; for though she is convalescent, she is not freed from danger whilst there are any bones remaining in the cyst, as they may again set up inflammation and may lead to rupture into the peritoneal cavity and a fatal result, an event which occurred in a case reported to me four years after the patient had passed nearly all the fœtal bones, and had so far recovered. The statistical tables arranged by Parry, Mattei, and Pucel, show clearly that the mode of elimination through an opening in the abdominal walls is the safest, and that clearly because there is a more ready and complete removal of the fœtal contents. Whilst all three agree that the woman is subjected to a considerable measure of danger when the discharge takes place by the bowel. Mattei says that this is the most unfavorable of all the various terminations of an old extra-uterine pregnancy. This Parry also admits ('Parry on Extra-uterine Pregnancy,' p. 166).

The question of treatment in a case of extra-uterine pregnancy, which has gone on to term with the fœtus living, is a serious one, and one on which authorities differ. From all I can gather, and from what I have seen, though fully admitting that each case must be dealt with on its own merits, I should judge it more in the interests of the mother not to interfere, but allow the child to die; then to wait for a time, or till some constitutional disturbance arose before making any attempts to remove the fœtus. Much as we may desire to deliver a living child from a living woman, yet the risk to both is so great that we may well hesitate. Parry states that of twenty mothers on whom gastrotomy was performed at or about the ninth month fourteen died, and of the twenty children delivered only eight lived. A mortality amongst the mothers more than 17 per cent. greater than in those cases left entirely to nature.

Dr. Poole asked if the hand introduced into the rectum

would not have been of use in the second case. If a point were taken in the forearm where its circumference equalled that of the knuckles with thumb, and a line drawn from this to the tips of the fingers, we could tell what length the arm would enter, supposing that the hand passed the sphincter with the due amount of pressure. In the average hand this line would measure ten or eleven inches. A much larger range of usefulness in diagnosis and treatment might be gained by the trained female hand, but, it would be still better if, where there could be found a medical man of very small stature, the profession generally were to take advantage of his hand and arm in suitable cases.

Dr. CHAMPNEYS said that Dr. Carter's first case was of interest as a typical example of what had lately been called septic intoxication (Vergiftung), depending on the continuous absorption of a chemical portion, and ceasing when that cause was removed, the effect being proportional to the dose; as opposed to septic infection, depending on the absorption of a living element which reproduces itself in the body, and therefore continues to develop itself, although the original cause be removed, the effect being not proportional to the dose. He would ask Dr. Carter whether any examination of the fluid had been made, and if so what, if any, bacteria had been found.

Dr. GODSON remarked that the first case related, which had as an out-patient been under his care at St. Bartholomew's Hospital, illustrated the difficulty of diagnosing between a retroverted gravid uterus and an extra uterine fœtation situated in Douglas pouch. The displacement of the cervix forwards, causing retention of urine, was common to both. On account of the thickness of the abdominal parietes and the early stage of the pregnancy, the fundus uteri could not be felt on bimanual examination. In attempting to raise the swelling posterior to the cervix, presumed to be the fundus, very little force was employed, and the wisdom of this was manifest. Its resistance at once suggested a doubt as to the accuracy of the diagnosis.

Dr. GERVIS, in connection with the difficulty experienced in the differential diagnosis between retroversion of the gravid uterus and extra uterine gestation in Dr. Carter's first case, referred to the aid to be derived from noticing the peristaltic hardening of the fundus of the retroverted uterus.

Dr. CARTER ,in reply, said that the abdominal incision was not made under strict antiseptic precautions, though the cavity was frequently washed out with carbolic lotion. He had not examined the fluid from the abscess for bacteria.

REPORT ON SIXTY-SEVEN CASES OF UTERINE DISTORTION OR DISPLACEMENT, TREATED DURING SEVEN YEARS, AT ALL SAINTS INSTITUTION FOR LADIES SUFFERING FROM ILLNESS.

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I SUBMIT the following report of the cases of uterine distortion and displacement treated by me at the All Saints Institution, 127, Gower Street, during the past seven years, from May 1st, 1872, to May 1st, 1879, as a practical contribution to the study of the history and treatment of these affections. The patients who form the subject of the following observations were not hospital patients in the ordinary sense of the word. Many of them were governesses, or ladies dependent on their own exertions for a livelihood, writers, wives of curates, wives of officers, &c. The ages of the patients varied from eighteen to thirty, and the majority were over twenty years of age. The cases were sixty-seven in number. To quote the words of the report, lately issued, "During the seven years seventy cases of this kind have been treated, comprising various forms of uterine displacement, associated often with great weakness, with a slow but disguised kind of starvation, and more or less complete inability to walk or move about in the ordinary manner."

The maladies with which these sixty-seven patients were affected existed in various degrees of intensity. In several cases the patients were actually bed-ridden, in others the capacity for locomotion was so materially diminished that the sufferers had to give up their employment. In other cases again the malady, though not so severe, had proved

intractable, and therefore relief was sought in the institution.

Outwardly the condition of these patients was characterised by great weakness, more or less inability to walk (uterine dyskinesia), and a general condition of mal-nutrition. Internally the principal organ affected was the uterus; various degrees and forms of uterine distortion and displacement existed, causing painful symptoms of various kinds, pain on locomotion, sickness, and menstrual irregularities being those principally spoken of.

The sixty-seven cases in question have a great family resemblance, and offer a series of facts interesting as bearing on the natural history of this important class of cases.

I now proceed to give a summary of these facts. The cases resolve themselves into two classes, viz. *a*, cases of anteversion or flexion, forty-five in number; *b*, cases of retroflexion or retroversion, twenty-two in number.

A. *Cases of anteversion and anteflexion of the uterus.*—The number of cases was forty-five, showing a numerical frequency double that of retroflexion, thirty single, fifteen married. The severity of the cases may be judged roughly by the time required for the treatment. Thus one patient was admitted three times during thirteen months, remaining altogether fifteen weeks in the institution. This was a case of chronic invalidism of several years standing, the restoration being finally satisfactory. Another, also some years ill, was under treatment at the institution during a period extending over two and a quarter years, her whole stay, including four admissions, extended to twenty-five weeks. The most distressing symptom in this case was sickness of an extremely obstinate character. She finally completely recovered. Another severe case was under treatment for about twenty-five weeks, with sickness also as a prominent symptom. The mechanical difficulties of the treatment were not surmounted in this case, and the subsequent history is not known.

A case of the completely bed-ridden character may next be mentioned, in which hysterical attacks and symptoms

had existed, together with incompetency for movement for some years. This patient was under treatment for over a year, and was upwards of thirty weeks in the institution. Recovery was eventually complete. Another very severe case, in which the great difficulty lay in the extreme weakness of the stomach, and consequent inanition, was under treatment at intervals for over three years, and is not yet restored to health. A severe case, with marked hysterical symptoms, was admitted three times during eight months, and was eleven weeks under treatment; recovery perfect. Another case was sixteen weeks under treatment during a period of over a year; result eventually quite satisfactory. An exceedingly severe case was that of a patient who had been reduced to a helpless condition from long-standing anteflexion, one leg having become contracted and stiffened from the long lying in bed. This patient was over a year under treatment, but is now able to walk about and is perfectly well. Severe convulsive attacks, especially at the menstrual periods, were present in another patient associated with severe anteflexion. She was under treatment for twenty-seven weeks, during a period of over a year. Recovery was complete. Lastly, may be mentioned a case of chronic anteflexion and great debility; only under treatment a short time, but who, a year or more after leaving the institution, died from prolonged sufferings, connected, probably, with the presence of the uncured malady.

B. *Cases of retroversion and retroflexion.*—The number of these cases was twenty-two; fourteen were single, eight married. Of the more severe cases, one, married, was under observation one and a quarter year, and was sixteen weeks in the institution, suffering from miscarriages, due to retroflexion; cure complete. Another patient, also married, was treated at intervals during two years, the retroflexion causing sterility; the sterility has not been cured. In another case the patient was treated for fourteen weeks, one chief symptom being severe sickness. A very severe case was under treatment for several weeks together at intervals, during a period extending over two years. The uterus was much flexed in

this case, and the ovaries dragged down behind it, but after a long period of treatment considerable relief was obtained, and power of walking in great part restored. In this case also sickness was a prominent symptom. In another case there was what amounted to almost complete paraplegia; the spine had been injured by a fall, but the paraplegia was considered to be dependent on the uterine condition. The considerable relief obtained by treatment of the uterus—for the patient is now able to walk with the assistance of sticks—justified this view, and it seems probable that a complete cure may in time be obtained. [This patient is now, November, 1880, quite able to walk without any assistance.]

Circumstances of an obvious nature prevent a more detailed account of the interesting series of cases, of which the above is a very brief summary. There were many others less severe in degree but the same in kind.

In the next place it is proposed to explain the method of treatment by which a very large proportion of these patients were restored to health and usefulness.

The first principle in this treatment was *rest*. The patients were, as a rule, kept in the recumbent position. According to the tendency of the uterus to a backward or a forward displacement the patient was made to lie more or less in the prone position or on the back.

The next principle of treatment was to improve the general nutrition of the body. Most of the cases afforded marked instances of chronic starvation, sometimes of several years' standing.

Food of an easily assimilable character was given very frequently, sometimes every hour or oftener, and during the whole stay of these patients in the Institution the greatest pains were bestowed on this element in the treatment.

In cases where the stomach was too weak to digest readily, or in cases of severe nausea, nutrient enemata were also employed. It was found that in some cases a period of many months careful nutritional treatment was requisite to make a real impression on the system and produce a decided improvement. In one case nearly a year was spent in getting

the patient to be able to take a moderately full meal without following discomfort.

In the next place the alteration in the position and shape of the uterus was rectified. The measures employed were of a very simple character. In some cases positional treatment, the dorsal or prone position or the knee-and-elbow positions were employed without other local measures of any kind. But the greater proportion of the cases being really obstinate and long standing distortions of the uterus, required, in addition to postural treatment, also mechanical internal aid. The aid thus given consisted in placing a pessary carefully fitted and so adjusted as to keep up a constant gentle pressure in the proper direction—a Hodge-shaped pessary for retroversions and retroflexions, and a cradle pessary for anteversions or flexions. These instruments were allowed to remain, often undisturbed, for several months if found to fit and act well. In cases where the uterus had become hardened in its flexed shape, the sound was employed once or twice a week to aid in the restoration. The conjoint occasional use of the sound and the use of a pessary constituted, with very few exceptions, the whole of the local mechanical treatment. In cases where the uterus was soft, and this was not unfrequently the case, in consequence of the very great feebleness of the system and the general want of tone, the sound was comparatively unnecessary, the uterus giving way to the prolonged action of the pessary and the positional treatment.

The good results obtained by these comparatively mild procedures were in great part due to the complete rest which the patients enjoyed during the period of treatment, not less than to the great care bestowed on the restoration of the general strength.

Various subsidiary measures were employed. The sponge bath, frictions of the skin, excessive care to prevent constipation, should be mentioned under this category.

The principles kept in view were, briefly, to gently elevate the fundus uteri into its proper position, and to straighten the uterine canal, to avoid everything calculated to interfere

with this mechanical restoration, and to nourish the frame and strengthen and harden the tissues of the body generally by careful feeding, in the expectation—an expectation verified by practical results—that the uterus could thus be hardened and set in its normal shape; and that after a proper period of repose, and continuance of such treatment, this organ would retain its normal shape when the patient returned to a more active life.

Reviewing the cases treated during these seven years, and having before me the facts relating to these cases, certain general conclusions present themselves. The first remark which it occurs to me to make, is the strong evidence given by these cases as to the necessary connection between the health of the body generally and the health of the organs of generation, especially of the uterus. It may be said that this is not a new observation, but it is certainly the fact, nevertheless, that if not new, it is not sufficiently widely known amongst those who are responsible for the bringing up of young women, that unless the strength be adequately sustained by proper food during the growing stage, as it may be termed, the uterus is liable to suffer in an especial manner, and to become so weak that it is incapable of resisting the physical strain and tension of an ordinary active life. Many of the patients referred to above offered the most convincing proofs of this. Imperfectly fed, called upon to undertake physical labours, duties, or engagements, the body being as a whole in a weak, feeble condition, the internal organs began to suffer, and after a struggle of frequently two or three years or more to fulfil these duties, they had finally to give up work altogether.

It was quite easy to trace in the previous history of these cases an almost universal predisposition of this kind. It was perfectly exceptional to meet with a case in which a really satisfactory account of good previous health could be elicited. The absence of sufficiently invigorating diet appears to tell upon some organs more than others, but in the cases above related, it appeared to have exercised its worst action on the uterus, as that was the organ which was the

centre of the symptoms for which the patient sought relief.

It is evident from these considerations, that local treatment of uterine maladies, such as those above related, could not be reasonably expected to be permanently successful unless associated with measures calculated to rectify the general extreme weakness; and, in fact, the general treatment occupied necessarily a most important place in their management. The physical change in the uterus, resulting from prolonged insufficient food, is generally, and in the first place, an actual softening and loss of tonicity, whereby the organ seems to lose its power of resistance.

A second general conclusion suggested by these cases is the remarkable frequency with which the patients were affected with physical powerlessness, an incapability of locomotion varying in degree but often most serious, especially in the case of young women dependent on their own exertions. This symptom, so frequently observed, is one which I have designated "uterine dyskinesia." It is so generally observed that I may say almost all the sixty-seven patients admitted into the Institution and comprised in the foregoing remarks presented it in a marked form. It may almost be said that this was indeed the principal symptom, and the one which had forced itself on their particular attention in the majority of the sixty-seven cases. This symptom I regard indeed as one deserving of attentive notice in all cases of uterine distortion and displacement. The fact appears to be that physical exertion, of almost any kind, is under such circumstances uncomfortable in various ways, because it involves an exaggeration or temporary increase of the malady from which the patient suffers. An active life is necessarily abandoned after a time by the sufferer and a helpless invalidism is the result in protracted cases. Some of the patients treated in All Saints Institution had been bed-ridden for several years. With reference to such cases, it must be further remarked that the affection, which is indeed a very real one in these instances, is one which it was formerly the custom to regard as imaginary, fanciful, or

hysterical, and such patients were consequently deprived not only of medical help, from the fact that their cases were misunderstood, but of the sympathy of their friends, who regarded them as capable of exertion if "they only made an effort," as the expression goes. The fact is, that in these cases exertion only aggravates the mischief and perpetuates the malady.

The next general remark I would make in reference to these cases, is that in the large majority of them the existence of sickness or nausea or a disinclination for food, was a most noticeable and troublesome complication. There were many cases in which extreme sickness always followed the taking of food, but in many others nausea existed, and in all it may be said there was a disinclination for food. This symptom is certainly a very common one in cases of uterine irritation, and these cases bear out in a very decided manner the generalisation which I would thus express:—Distortions and displacements of the uterus, when aggravated and increased temporarily or persistently by particular exertions are liable to produce an exceedingly troublesome form of sickness or nausea. Quiescence of the uterus, and removal of the strain upon it, almost invariably puts an end to this symptom at once.

This nausea or sickness, or indisposition to take food, is, doubtless, a reflex symptom. It is a most important one, for so long as it exists it produces an enforced abstinence. This abstinence from food, if prolonged, and it frequently is prolonged for months, or even years, is more or less complete in different cases, but it leads, of course, to starvation, more or less pronounced. Each day the quantity of nourishment taken is infinitely below the requirements of the system. Thus, the uterine irritation acts directly on the stomach, producing nausea, and the stomach reacts on the uterus; for the uterus is, in common with the other organs, insufficiently nourished, and thus the vicious circle is kept going, to the detriment of the unfortunate patient.

I could give case after case in detail out of the foregoing list of patients treated in the All Saints Institution

to bear out the truth of these conclusions, in regard to the connection between the uterine irritation and the sympathetic gastric disturbance.

It must not be forgotten that, while the stomach itself may be perfectly healthy to begin with, this organ also becomes, later on, the seat of disease. Inanition has its effect on the mucous membrane of the stomach and on the power of secreting gastric juice, and in the end the stomach is so weakened that, even when the uterus is put at rest, and possibility of irritation by it made to cease, the patient may be unable to digest food easily for some time. The power of digestion is small, and the patient must be treated by very frequent and small doses of nutriment at a time, such as the stomach can easily deal with. It is useless to expect these patients to eat an ordinary large meal given three times a day. Food is best given very frequently, every two hours at least in the day, and a small quantity at a time, and that of the most nutritious quality.

I have hitherto said nothing as to another class of symptoms observed in the cases treated as above, viz. the disorders of the menstrual function. In very few of the cases was menstruation normal in character; in many there was dysmenorrhœa, in several there was menorrhagia, and in not a few amenorrhœa. I abstain from dilating on these particular symptoms, not because they were considered unimportant, far from that indeed, but because I have little to say on this subject which is very novel. As a matter of fact menstrual derangements were common. They were found always amenable to the treatment above mentioned, generally subsiding when the uterus was kept at rest, its proper shape restored, and the canal of outlet for the menstrual secretions maintained in a patent condition. The same observation applies to leucorrhœa, which in some few cases presented itself in an obstinate form, arising from retention of intra-uterine secretions, coupled with a quasi-strictured condition of the internal os uteri. In these latter cases the proper drainage of the uterine cavity being provided for by straightening or dilating the canal, the leucorrhœa was soon found to cease.

Intra-uterine cauterisation was not employed, but astringent vaginal applications were freely used.

Dr. GERVIS, after expressing his sense of the value of Dr. Hewitt's paper, was yet inclined to differ from him on two or three points. He had seen cases in which the postural method had been adopted for many consecutive months, and in which the only result was impairment of the patient's health; and he certainly would fear that when this method was fully carried out, even if it benefited the position of the uterus, it would do so to the damage of the patient's general health, and so go far to neutralise the improvement obtained as regards the uterus. Dr. Hewitt spoke of leaving the pessary, when satisfied that it was doing its duty, without disturbing it for several months. Besides the possible dangers to the vagina, which might accrue from leaving in a pessary for so long a period, it appeared to him (Dr. Gervis) that it should be removed at moderately short intervals, both for the sake of cleanliness and also for accurate investigation of the position of the uterus, a matter difficult to accomplish with the pessary still *in situ*. His own belief as to flexions was that their importance very largely depended upon the amount of obstruction induced by them in the cervical canal, and that if there were no obstruction it mattered little in which direction the uterus looked; that it was the obstruction and not the displacement which led to the endometritis and hyperplasia and resulting functional disorders. On the subject as a whole he was of opinion that a classification of cases of retroflexion according to their behaviour on reposition would be a great aid to their more satisfactory treatment; and as regards cases of anteflexion he had for some time treated very few with pessaries, the possibility of giving adequate support to the anteflected body by external means being very limited, but, acting on the principle that the potency of the cervical canal was of chief importance, he had treated these cases with the uterine bougies, and in many cases with very satisfactory results.

Dr. BARNES said the paper entirely justified the criticisms it had received. No one could practise gynecology successfully who did not recognise the importance of flexions and treat them. He thought that in Dr. Hewitt's paper rest was too rigidly insisted on. On the contrary, exercise and fresh air were often needed in these cases. Such a mode of life was not at all contrary to mechanical treatment of the flexion; for a properly adjusted pessary gave rest to the uterus, and its good effect was aided by exercise. He thought that the value of intra-uterine medication was hardly enough recognised; where there was strangulation of vessels and resulting hyperplasia, intra-uterine

medication was often most useful. To use the sound alone for reduction of a flexion was bad practice; where the sound would correct a flexion a pessary would do so. There were, however, a few cases in which a sound was required. He thought that the fixation of a flexed uterus by adhesions was much rarer than was supposed and that where this was the case the bands of adhesion might often be stretched by the use of a proper pessary. The nervous diseases of women caused by uterine diseases were most important. He had seen cases of insanity cured by putting the uterus right.

Dr. Gervis added that he entirely agreed with Dr. Barnes as to the use of the sound.

Dr. Routh said that in his opinion the most valuable part of Dr. G. Hewitt's paper was that which referred to the general hygienic treatment of cases of flexions. The starvation induced by the dyspeptic symptoms which the uterine lesions first originated (extending as it often did over years), left the patient so weak and exhausted, and so neuralgic, that their pains became agonising, and they confirmed invalids. Indeed, he fully concurred in what Dr. Barnes had said, that this variety of invalidism often assumed a mental character allied to insanity, and he was sure he had seen such cases in asylums where he firmly believed the insanity was mainly referable to uterine disease of this variety, and yet the cause had been overlooked. But he could not concur with Dr. G. Hewitt as to the advisability of keeping patients on their back, in a sort of hospital imprisonment, for so long. The very want of appetite, and the hypochondriasis and the debility, were all likely to be aggravated thereby. Moreover, other practitioners were not so fortunately circumstanced as Dr Hewitt in having a nice and comfortable All Saints Institution in which these poor invalids might be immured. Then a large number of these invalids were *governesses*. This class of ladies were peculiarly obnoxious to these flexions, because, and he said it advisedly, ladies who engaged their services, however kind in other respects, compelled their governesses to take lengthy, and exhaustive walks with their children, and so laid the foundation for these disorders. There was one other point upon which he ventured to differ from Dr. Hewitt, and that was in reference to the use of the *cradle* pessaries for anteflexion. He had the misfortune—and probably it was a great misfortune—of having never seen any good practical result from their use. Possibly, because these were cases *not* treated by Dr. Hewitt himself, but by some of his less experienced followers. The cases now mentioned by Dr. Hewitt gave him (Dr. Routh) a direct contradiction, possibly because, like every other great inventor, he could do with his instrument and succeed when others less gifted than himself might fail. Whether this was so or not, at any rate, he had seen very serious inflammatory complications follow the use of

the cradle, and in one case which he had only seen last week, it was so tightly jammed in the vagina of a poor lady, where it had remained seven months, that he (Dr. Routh) could not pull it out with the finger, but was obliged to do it by main force with a midwifery hook and thus deliver the lady of her pessary. He thought that for cases of retroflexion the Hodge-pessary would be found to suit in most cases; but, for cases of ball-and-socket flexions, or anteflexions, nothing short of an intra-uterine pessary would in his opinion cure the patient. Whether the varieties he had brought before their notice on a former occasion or a Dr. Wynn Williams's were used, if proper precautions were first employed they did no harm, and might be kept in for five or six months, and the patient allowed to go about and not invalided, confined in a hospital. One case of Dr. W. Williams's he had seen with complete anteflexion, and who was bed-ridden, was cured by his instrument in three days. Possibly Dr. Hewitt would have kept this patient a hospital inmate for months. Certainly, the relief his (Dr. Routh's) instrument had given to some of his patients had most agreeably surprised him. Dancing, walking, running, had been made possible even while wearing it, and health induced to an extent the patients stated themselves they had not enjoyed for years. But they breathed fresh air, and were made to eat and live well also.

On the motion of Dr. Bantock, seconded by Dr. Rogers, the discussion was then adjourned until the next meeting.

JULY 7TH, 1880.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—37 Fellows and 7 visitors.

Books were presented by Dr. Van der Bosch, Dr. W. T. Lusk, Dr. P. F. Mundé, Dr. W. L. Richardson, Dr. V. Saboia, and Dr. Isaac E. Taylor, the American Gynecological Society, and the Obstetrical Society of Philadelphia.

George Henry Hames, F.R.C.S., Thomas Charles Marsh, M.R.C.S., and Sidney Parsons, M.R.C.S., were admitted Fellows of the Society; and Walter Balls Headley, M.A., M.D. (Melbourne), and Robert Francis Black, M.R.C.S. (Trinidad), were declared admitted.

The following gentlemen were elected Fellows:—Samuel Nall, M.R.C.S., William Outhwaite, M.R.C.S., Charles James Sutherland, L.R.C.P. Ed. (South Shields), and Julius John Eardley Wilmot, M.D. (Weston-super-Mare); and the following were proposed for election:—Griffith Griffiths, M.R.C.S. (Rrynedyn Pontardawe), Robert James Mills, M.B., M.C. Aberd. (Norwich), and Henry Thompson, M.R.C.S. (Hull).

UTERUS OF A WOMAN, ÆT. 69.

DR. CHAMPNEYS showed the uterus of a woman, æt. 69. The posterior wall was occupied by a large fibroid, which

had extended into the posterior lip of the cervix and far below the level of the os externum. The rest of the uterus was a mere bag, not thicker than a double sheet of blotting paper; this atrophy affecting the cervix also. In the right broad ligament was a fibroid, calcified *en coq*, the size of a large tennis ball.

RUPTURE OF TUBAL FŒTATION.

Dr. Godson showed the uterus and appendages of a woman, æt. 22. She was married, and had two children. When sitting at needlework she was suddenly seized with violent pain in the lower abdomen, and became faint and pallid. Mr. Henry Thompson, of Hull, who saw her in the course of an hour, found her in a state of collapse, almost pulseless; stimulants failed to rally her, and in exactly eight hours from the seizure she died. At the autopsy Mr. Thompson found the abdomen full of fluid blood and clot, amounting to at least six pounds. The specimen showed the right Fallopian tube distended towards its centre by what appeared to be a fibrinous clot, in this situation a rent had taken place, through which the blood had escaped. The uterine cavity was lined with decidua, and the cervical portion was occupied by a mucous plug. The right ovary contained at its surface what appeared to be a recently-ruptured Graafian vesicle containing a small clot. No ovum was found. It had been ascertained that the patient had menstruated six weeks previously, but whether subsequently was not known.

Dr. Godson remarked that the specimen closely resembled one he had exhibited earlier in the year; the swelling in the Fallopian tube was of the same dimensions, and it was found to contain the structure of the chorion.

Dr. Wiltshire inquired in what manner the blood was distributed in the peritoneal cavity. He sought information on this point, believing it to have important bearings on the pathology of blood effusions in the pelvis, a subject to which he hoped

before long to call the attention of the Society. Dr. Wiltshire thought this case illustrated the propriety of ligaturing and removing the ruptured and bleeding tube—a practice he had on several occasions advocated before the Society, and one which he believed would be adopted when the ambiguity surrounding the diagnosis of these cases was removed. After alluding to cases lately seen by him in consultation, and indicating the difficulties attending the differential diagnosis of ruptured tubal gestation, Dr. Wiltshire expressed the opinion that, in an unequivocal example, in which the patient was obviously sinking from internal hæmorrhage, operative measures, such as he had indicated, were required, and, in these days of improved abdominal surgery, might be crowned with success.

Report of Committee on Dr. Chambers' Case of Hysterectomy.

The tumour measured 9 inches in lateral horizontal diameter; 8 inches perpendicularly; $4\frac{3}{4}$ inches antero-posteriorly.

On section it was found to be a large fibroid uterus.

The fibroid was situated above the cavity, into which it bulged, and which it rendered bicorned, the right horn being $5\frac{1}{2}$ inches, the left horn 5 inches long.

The mucous membrane varied from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch in thickness.

The fibroid tumour was encapsuled by the proper uterine tissue, about $\frac{3}{4}$ of an inch thick. The capsule could be easily separated from the fibroid in the upper two thirds of the tumour, but, at the commencement of the lower one third, uterine wall and tumour became ultimately joined by blood-vessels, arranged in a cavernous manner, opening into each other in all directions, and greatly dilated, one sinus measuring $\frac{1}{2}$ an inch in diameter.

On cutting into the fibroid it was seen to consist of several large lobes, joined by areolar tissue, in which a few vessels ran, one of them as large as a crow-quill.

GEO. GRANVILLE BANTOCK.
FRANCIS HENRY CHAMPNEYS.
June 8th, 1880. THOMAS CHAMBERS.

LADIES' SANITARY TOWELS.

Dr. Galabin showed the new ladies' sanitary towels manufactured by Messrs. Southall, Barclay, & Co., of Birmingham. They were extremely light and soft, and contained a pad of absorbent cotton wool. This was rendered antiseptic with boracic acid, as being less irritating than other antiseptics, and was scented with lavender. They were intended to supersede the ordinary diapers for use during the catamenia and after confinement. In addition to their lightness and softness, their great advantage was that they could be burned after use. The retail price was three shillings a dozen, and, as it was believed that they could be used longer than the ordinary diapers on account of their greater absorbent power, the cost would not greatly exceed that of washing the usual diapers. A cheaper variety could be obtained for hospital use. Dr. Galabin thought that, whether or not they should come into ordinary use at catamenial periods, there could be no doubt that they would be very convenient for travelling, and also of great advantage for use after delivery, on account of their antiseptic quality. The wholesale agents in London were Messrs. Perrin, Sharp, & Co., 31, Old Change.

REPORT ON SIXTY-SEVEN CASES OF UTERINE DISTORTION OR DISPLACEMENT, TREATED DURING SEVEN YEARS, AT ALL SAINTS' INSTITUTION FOR LADIES SUFFERING FROM ILLNESS.

Dr. Bantock.—In resuming the discussion elicited by Dr. Graily Hewitt's paper, I am desirous of offering some remarks on the subject of uterine displacements. If in the course of these remarks I should seem to some to be rather too dogmatic on some points, I must ask you to believe that it is not

because I have no arguments to advance in defence, or evidence to bring forward in support, of my position, but it is because the limited time at my disposal, and which will be in great measure owing to your forbearance, will not admit of any lengthened argument on points that may be in dispute. As the subject is a very wide one, I shall endeavour to lay my views before you as concisely and as pertinently as I can; and for this I shall have to ask your indulgence for a short time.

Before proceeding to the subject in hand I may be permitted to express my high estimate of the value of the paper as a practical contribution to this very important question.

In my opinion not its least merit consists in the prominence which is given to the doctrine that deviations from the natural position of the uterus are undoubtedly the cause, either directly or indirectly, of much, though variable, constitutional disturbance as well as local suffering. There can be no doubt that the author is thoroughly convinced of the truth of this doctrine. Such being the case he is right, as Dr. Barnes justly remarked, in continuing to hammer away at the subject. Nor is it any the less the duty of those who think with him to continue their exertions in the same direction until the doctrine meets with more general, if not universal, acceptance.

Now it is something to find common ground from which to start; for it so happens, may I say, unfortunately? that while we are agreed on general principles, there will yet be found to exist considerable divergence on some points when we come down to particulars. We both recognise, in principle, the necessity and value of mechanical appliances in the treatment of this class of cases, but we do not necessarily agree on the mode of application. But these are matters of detail.

The amount of evidence now forthcoming in favour of this doctrine is so overwhelming that I can scarcely imagine any one any longer offering it serious opposition. It is an encouraging fact to those who accept this doctrine that, however determined was the opposition of ten or fifteen

years ago, it has gradually got less and less as time has advanced, until in our own day it finds that qualified expression which we meet with in the classic pages of our late President, Dr. West. As for myself, starting in professional life without any predilection either one way or the other, and certainly without any knowledge on the subject, I have seen so many instances of health, that had been long impaired in this way, restored by treatment based essentially on this view, that had I been one of the most sceptical of men I must have been satisfied with the evidence. But it may be said, and indeed it has been affirmed, that the symptoms which accompany uterine displacements are not due to the displacement but to coexistent states of the uterine tissues and functions, and that one has only to cure these and the symptoms will disappear. Thus, Scanzoni in his work 'On the Diseases of Females,' tells us that, as the result of his observation, "Flexions (under which head he also includes versions) do not acquire any importance, nor are followed by any serious dangers, save when they are complicated with an alteration in the texture of the organ." As he gives us the data on which he bases this opinion, we are enabled to estimate its worth. He appears to have arrived at this conclusion from having observed several cases of what he calls anteflexion that were unattended with symptoms. One of these was that of a woman who died of phthisis, and was the subject of amenorrhœa; and another was that of a woman who died of marasmus from suppuration of the kidneys and bladder, and who menstruated regularly and painlessly, though in diminishing quantity towards the last. Of this case he tells us that Virchow verified the existence of anteflexion, post mortem; but, he has the candour to add, it was not very distinctly marked. Nor is the evidence afforded by the other cases any more conclusive, while his peculiar classification, as I shall yet show, throws a great deal of doubt into the subject. I do not know how far such evidence would satisfy you, but to me, I must say, it appears of the weakest possible kind. But, as if to spare any one the necessity of refuting the

doctrine he has laid down, and failing to be consistent with himself, he goes on to discuss the question "*how and why flexion eventually almost necessarily induces alterations in the structure of the organ.*"*

Similar to the views of Scanzoni are those held by Dr. Atlee, who, in a vigourous attack on pessaries, while admitting that he had had no experience in their introduction, but a large experience in their withdrawal, went on to say that, with the uterus and pelvic organs in a healthy condition, a change in the position of the uterus was of no significance whatever, and there was no need of an instrument to keep it in a certain position. Such, also, are the views enunciated in the work of MM. Bernutz and Goupil, and in that of M. Courty; and they are endorsed, though with some qualification, in the more recent work of Dr. West.

Now, I am not prepared to deny that there is some truth in the views of Scanzoni and Atlee and the others I have named, stated as an abstract proposition. It may even be true in a very small minority of cases that, with the uterus and pelvic organs in a healthy condition, a change in the position of the uterus is of no significance, and especially if the displacement take the form of anteversion. But this is simply begging the question; for the chief result of displacement, varying with the extent and mode of the displacement, is that very alteration of texture, and consequent disturbance of function, to which they attach so much importance and which Scanzoni takes so much pains to demonstrate. I am not aware that any one, even the most zealous advocate of mechanical treatment, has anywhere stated, or believes, that the displacement is the only element in the problem. Of course, in the great majority of cases there is a coexistent alteration of texture, but it is of the utmost importance to recognise the fact that this condition is the result of the displacement, and hence that the removal of the displacement must be the first step. Even when the displacement is not

* 'On the Diseases of Females,' by Scanzoni. Gardner's Translation. Page 115.

the first step, as in the case of *retroversion* of a subinvoluted uterus from the patient's getting about too soon after her confinement, the restoration of the organ to its normal position is just as urgent. In such a case the retroversion checks the process of involution, and thus may be regarded as the chief factor. I might illustrate this in the case of *anteflexion*, and show the successive steps of the process by which the change of texture is brought about, but that I have on a former occasion done so, and at considerable length, before this Society. Nor shall I quote cases from my own practice to enforce this point, as I might easily do did time allow. But I may be permitted to refer to a case in the practice of another, and which will be seen to possess more value than one of my own. Not long ago Dr. Angus Macdonald related a most instructive case, in which, after exhausting all the modes of constitutional and topical medication on which Scanzoni and Atlee would have relied in vain efforts to relieve his patient, he was obliged to have recourse to a pessary. The result was a complete success. At the same time he took occasion to confess, with a courage which all must admire, that, though he had begun practice strongly disposed to disregard uterine displacements, this case convinced him that he was bound to reconsider his position, and to recognise not only the importance of displacements as a cause of suffering, but also the value of the pessary as a means of relief. Whether the case was one of retroflexion according to his view, or of retroversion according to mine, is immaterial to the present argument.

With reference to the assertion that cases of displacement have been met with unattended by symptoms, I very much doubt the correctness of the statement if it is intended at the same time to affirm that the displacement was well marked, that it occurred in a woman whose generative system was in an active condition, and in whom the symptoms were not masked by those of some other and more acute disease. To this assertion may be opposed the evidence afforded by those cases in which a healthy uterus becomes suddenly displaced, usually backwards, as the result of a fall on the but-

tocks, or other application of force. That this accident is attended by well-marked symptoms I believe every one admits. I have recently published such a case, which you will perhaps allow me very briefly to recall. The case was that of a young girl, only fifteen years old, who met with this accident through falling on her face in a fit of sneezing, which seized her when she was in a stooping position. From that moment she complained of severe pain: her next menstrual period was so painful that she was obliged to keep her bed during part of the time, and she suffered more or less until I rectified the retroverted uterus by means of a Hodge's pessary, which gave her as immediate relief as the fall gave her pain. Here, then, the evidence is complete, and I may take this opportunity of stating that I have never seen a case of well-marked retroversion, of retroflexion, or of anteflexion, without some symptoms referable either to the time of the menstrual flow or the inter-menstrual period.

I believe, therefore, that the more marked is the displacement the more decided are the symptoms; that the symptoms are severe in proportion to the alteration in the texture of the organ, and its disturbance of function; that these conditions are the result of the displacement, and therefore that the only rational treatment is to rectify the position as the first step.

The division of uterine deviations into four great classes, viz. Retroversion, Retroflexion, Anteversion, and Anteflexion, is now generally accepted. Yet I fear, with Dr. Gervis, that the distinction between these is not always kept in view, and certainly not by the authors of our systematic works. I have often had to complain of want of precision in this respect, the terms *version* and *flexion* being mixed up in the greatest confusion as if they were synonymous, or at least as if the distinction were of no importance. In illustration of this statement I take the systematic works of three of our most distinguished Fellows. Thus, Dr. Graily Hewitt says:—"Changes in the form of the uterus are described under the term 'flexion and version,' the two being often confounded. Flexion of the uterus is generally associated with some

degree of version, but there may be version without flexion." And yet so much does the author proceed to confound them, that from the beginning to the end of the chapter the term retroversion occurs only twice, and then only as it were by haphazard. Nor is this confusion of ideas less evident in the figures which he employs to illustrate the text. But, seeing that he does not make a point of separating them, I am less disposed to find fault with him than I am with Dr. Barnes, who, ostensibly observing the distinction between them, and describing them under different heads, yet confounds them. In proof of what I say I will ask you to look at his figures, under the head of retroversion, illustrating the mode of applying the Hodge or lever pessary—for what? For retroversion? No! for retro*flexion*. It is not within the scope of my remarks to say anything of the illustrations themselves. The same want of precision is abundantly evident in Dr. West's more recent work. And, not to cite too many instances, I would just mention that while the late Sir James Simpson spoke of these backward displacements under the head of retroversion, his successor in the chair speaks of them under the head of retroflexion.

But while I advocate greater precision in this respect, I am not prepared to refine definitions down to mathematical exactness. Hence I cannot agree with Dr. Gervis in dividing cases of retroversion into three classes, viz.:—1st. Those in which the uterus may be permanently replaced by the sound; 2nd. Those requiring the support of a pessary; and 3rd. Those in which the uterus is bound down by adhesions. This is a classification that can serve no useful end in practice and simply burdens the subject. For I believe the first variety has no existence at all, and I am of opinion with Dr. Barnes that the third is exceedingly rare—so rare, indeed, as not to deserve being erected into a separate class with the character "incurable" attached to it. Of this variety I am unable to recall more than five instances. In four of these the condition was only conjectured to exist, but in the fifth it was verified by actual observation in the course of the operation of ovariotomy. In this case there were fila-

mentous bands between the uterus and the floor of the pelvis, similar to those which attached the ovarian tumour to neighbouring parts; but they were not such as to prevent the uterus from rising into its position when the pressure of the ovarian tumour was removed. I think, then, that nothing is to be gained by minute, and what I may be permitted to call fanciful, definitions.

Of far more importance is it to recognise the difference between retroversion and retroflexion; for instances are by no means uncommon, indeed they are, I believe, frequent, in which it is difficult to say whether the case is one essentially of flexion or version. Thus, the uterus may have been in the first instance retroverted, but in consequence of the cervix meeting with more resistance in its upward, than the body in its downward, movement, an amount of flexion has been superadded, whose intensity will bear a direct relation to the difference between the degrees of resistance. How is this to be determined? I am in the habit of regarding the position and direction of the cervix as the chief test. For instance, if the os point towards the coccyx, and the fundus can be felt in Douglas' pouch, behind the cervix, with the usual sulcus between the body and cervix, the case is a true retroflexion. If, on the other hand, the cervix be found behind the pubes, with the os pointing more or less towards it, or even above it, the case is one of retroversion. Under the last-named circumstance the uterus is turned nearly topsy-turvy. There is no difficulty in distinguishing between these two conditions. But there are all shades of gradation between these two extremes, and the nearer it approaches the intermediate position the greater is the difficulty. Let me take one of these. The uterine body is down in Douglas' pouch, and the os points to the vaginal outlet, so that the finger as it passes up the vagina goes straight into the os. Such a case, notwithstanding that there is a distinct bend at the junction of the body and cervix, whose concavity looks backwards, is essentially a retroversion. If, in such a case, you press the cervix backwards, you will find the body recede from you in a corresponding degree, until it can be made to

attain its natural position. To take another instance. The body is in the same position but the cervix is not so far forward, yet distinctly in advance of its natural position, and the os points towards the anus or thereabouts; but there is a much closer approximation between the body and the cervix, and the sulcus is deeper. Such a case is essentially a retroflexion; and it will be found that as you press the cervix backwards you double the uterus upon itself and the body does not rise correspondingly out of its position.

I cannot, therefore, too strongly insist on the importance of noting the distinction between these two states, for it has a direct bearing on the question of treatment.

The comparative frequency of these deviations is matter of dispute, so much so that it would be a hopeless task to evolve order out of the chaos that at present reigns. Such tables as have been constructed are hopelessly at variance with one another. The author of the paper makes no attempt in his systematic work to state their relative frequency. In the paper before us we find 67 cases. Of these 45 belong to the group of forward displacements—anteversion or flexion, and 22 to the group of backward displacements—retroversion or flexion. Of the 67, 44 were single, and 23 married.

We can thus satisfactorily account for the preponderance of forward displacements, and these proportions must not be taken as applying to the general community.

Dr. Barnes tells us that, as between the two forms of backward displacement, retroversion is not nearly so frequent as retroflexion. According to Klob retroflexion is rarer than anteflexion, but anteversion less frequent than retroversion. West tells us that "there seems to be reason for believing that the different varieties of flexions of the womb—as its retroflexion and anteflexion—are of more frequent occurrence than the corresponding alterations in position of the whole of the organ which is known as retroversion or anteversion" (p. 181). Again, of the two misplacements—anteflexion and retroflexion—"the former is alleged by Rokitansky, and by other morbid anatomists, to be

more frequent; and observation during life confirms, on the whole, the correctness of this statement. In my own notes, indeed, I find the particulars of 43 cases of retroversion or retroflexion, and of only 20 of anteversion or anteflexion; but these results are at variance with those of some most trustworthy observers, and I believe they are due to the circumstance that in the early period of my observations I often failed to mark the slighter degrees of anteflexion. Valleix, in his valuable lectures on this subject, gives 35 deviations of the uterus forwards, and 33 backwards; Dr. Mayer, of Berlin, met with 63 cases of the former and 64 the latter." Of the more recent writers the most precise in this respect is Gaillard Thomas, who observes closely the destructive characters of the two forms of backward displacement as I have laid them down. But he makes no attempt to state their relative frequency from his own observations. Of such statistics as he has been able to collect from others, viz. Meadows, Nonat, and Scanzoni, he says, "Nothing but discrepancy and doubt result from the comparison of the figures of these three conscientious observers," and "after such a comparison of statistical evidence" he feels inclined to agree with Sydney Smith when he said "There is nothing so unreliable as figures except facts."

It results, from my own observation, that the order of frequency in which these deviations occur is this, viz. retroversion, anteflexion, anteversion, retroflexion. Thus, of 2000 women who came under my notice in the out-patient department of the Samaritan Free Hospital during the three years 1872 to 1875, of which I have tolerably accurate notes, 149 were the subjects of uterine displacement, accompanied by symptoms which caused attention to be given to the pelvic organs. That this is only an approximation I am free to admit, and for this reason, amongst others, that many women who complained of pelvic pain or discomfort would not submit to examination. Of this number 72 had retroversion, 51 had anteflexion, 21 had anteversion, and only 5 had retroflexion. Thus, there were 77 cases of backward and 72 of forward displacement, a statement of results,

in this form, closely approaching those of Valleix and Mayer. In private practice I find the same proportions, and I am convinced that if the characteristics of each form were observed as I have laid them down, in common with Thomas, they would be very closely verified. So long, however, as there is an absence of unanimity in respect of classification, so long will statistics continue to be useless and even misleading.

But I must now pass on to the question of treatment, of which I would make this general remark, that it is little to be wondered at that such discrepancy should exist, seeing that there is so little unanimity in the matter of classification. I believe much of this difference of opinion, both in respect of classification and treatment, is due to that want of precision of which I complain.

The mechanical treatment of uterine displacements received its first great impulse from the late Sir Jas. Simpson, to whose inventive genius gynecology owes so much. But it is to Dr. Hodge that we owe the greatest advance, viz. in the introduction of his most admirable instrument. Here let me say, in justice to that inventor, that men have exercised a great amount of ingenuity in small things, and with smaller success, in their attempts to improve this instrument, until their name is legion. As Gaillard Thomas says, all the varieties of lever pessary now employed are modifications of his (Hodge's) original and most valuable idea, and act upon the principle which it developed. But because it has received a little extra bend here, or been straightened out there, or has been narrowed in one place, or widened in another, it must, forsooth, receive the name of the ingenious man who has effected this infinitesimal alteration in it. Where it has been tortured out of all semblance to the original I willingly grant the inventor the honour of its fatherhood, with all the rights thereto appertaining. But I have no sympathy with such pursuit of notoriety, and such efforts as tend to deprive a man of that credit which is his due. The fact is, every case requires that the instrument be modified to suit the capacity

and shape of the vagina, just as when one enters a boot-maker's shop he has to try on boot after boot until he gets one that fits. No one is more aware of the necessity of this modification than was Dr. Hodge himself. So that if every one who makes this slight and necessary alteration is to christen the instrument afresh—well, I leave it to your imagination to picture the result.

Retroversion first claims our attention, not only because of its greater frequency, but also because of the greater severity of the symptoms that accompany it. If you have remembered what I have laid down as the chief characteristic of this displacement, and if I have made myself clearly understood, you will be prepared for the statement that the only appropriate treatment is that by means of Hodge's pessary.

Time fails me for entering upon any argument on the matter, and the publication of a pamphlet some two years ago, 'On the Use and Abuse of Pessaries,' spares me the necessity of doing so, and I will merely say that in my opinion this instrument exerts no direct action on the body, but acts by drawing the cervix back into its normal position, by which means, also, the body is made to rise out of the pelvis. Let me here say that an intra-uterine stem should not be used for a genuine and uncomplicated retroversion, and that, because this practice has now fallen into disuse, a fact of which West makes a great deal in his opposition to mechanical treatment, we should not therefore cast discredit on the principle. For as MacDowell's thirteen ovariotomies opened up the way to the present glorious position of that operation, so Sir James Simpson's intra-uterine supporter was the first step towards that more precise and rational method which now obtains, though, I regret to say, only partially.*

* Here was exhibited a complete set of Hodge's pessaries, such as I am in the habit of using, made of pewter, and one that had been worn for twelve months without having been once removed. It was almost as clear as when first put in. They are made by Krohne and Sesemann, Duke Street, Manchester Square.

Just the reverse of what I have been saying of retroversion holds good in the case of retroflexion, which can be treated satisfactorily only by some such instrument as Meadows' compound stem, which I now show you, and than which I know no better. And let me say that I have listened with incredulity, if not amazement, to the statement, not seldom heard within these walls, that the speakers were in the habit of treating cases of retroflexion by simply turning the uterus forward by means of the sound; and I regret to find that our author is not free from the charge of this heresy, either in his systematic work, or in the paper before us. Far as it is from being true, even in the case of retroversion, that a cure has been thus effected, as even West testifies, it is much wider of the mark in the case of retroflexion. *A priori* reasoning is against it, the physical properties of the organ are against it, and practice confirms what theory suggests. Any one who should have the opportunity, as I have had, of handling a retroflected uterus in the living subject, will at once see and be convinced, from the persistence with which the uterus returns to its bent condition after being straightened, that some such combined support as this instrument affords can alone avail anything.

With regard to anteversion, I have only to say that as it is the form of displacement which is the least in degree, for anatomical reasons, with which I need not detain you, so it is accompanied by fewer symptoms than any other, and calls least for treatment. This is so far fortunate, for slight as is the displacement, it is yet the most difficult to treat mechanically. May not these circumstances also be held as in great measure accounting for the views of Scanzoni and others?

Anteflexion would have demanded more extended notice than I can now give it, had I not so recently laid my views before you in considerable detail, as they will be found in the twentieth volume of our 'Transactions.' Premising that the state of congestion was to be met by depletory measures, I then showed that the treatment of this condition depended on the attendant circumstances; that in the early stage it

often sufficed to pass the sound occasionally, leaving it in for an hour or two each time; that when there was constriction of the internal os—a fact of which some denied the existence, but of which I show you the evidence written, as it were, on this laminaria tent—then bilateral division of the cervix was necessary, and that when the flexion was very pronounced, some form of intra-uterine stem was ultimately required.

As confirmatory of my views in this respect, I must ask you to allow me to read the following short extract from the work of one of the foremost in the great Transatlantic School of Gynecology. I refer to Dr. Goodell, of Philadelphia. He says:—"Some four years ago I wrote a series of articles for the 'Medical and Surgical Reporter,' of Philadelphia, in which I termed this instrument a good one, a very good one—*to watch*. I had then just passed through an unpleasant experience with it in two cases. . . . . With this unhappy experience fresh in my mind, I was led to condemn in these articles the use of the intra-uterine stem. But, since then, a riper experience has taught me a good deal about this pessary, and has wholly changed my views with regard to its use. I now hold that there are certain stubborn cases of anteflexion, and, for the matter of that, of retroflexion too, which can be satisfactorily treated in no other way than by this stem. Not a month now passes without finding one or more of my patients under its use. So changed, indeed, are my views on this point, that in a discussion on this instrument at one of the meetings of the American Gynecological Society, held in Boston, I stated that I had left two unmarried ladies in Philadelphia, each wearing this kind of pessary."

Nor have I left myself time to say anything on the important question of rest, except to remark that this idea underlies the principle of the mechanical treatment; that rest, in the ordinary sense of the word, however applicable it may be in the treatment of inflammatory conditions, may easily be carried too far when they are absent; and that it is a most grievous misapplication of this beneficent principle to keep

a patient lying on her stomach for months, in the vain hope of curing a retroversion.

In conclusion, allow me to say, with respect to the cradle pessary in the treatment of anteflexion, that I have never seen an instance in which it has done any good; that from anatomical considerations, which the most cursory examination must supply, I have shown how it is improbable that it should do any good—nay, that it is impossible that it can do any good, in the way represented; and that, as Dr. Hewitt has seen reason to modify his original instrument, so let me express the hope that he may yet see the necessity of modifying his views also; for I cannot but feel assured that a persistence in these will only hinder the advancement of that art which he has so much at heart, and detract from that full measure of credit to which he must otherwise have attained.

Dr. Rogers said he was old enough to remember when the use of uterine supports were almost unknown or denounced by obstetricians; he well remembered one of their past presidents stating that he never used a pessary of any kind, believing them to be dangerous instruments. Having to treat for many years past the out-patients of a dispensary and woman's hospital, he had found pessaries, especially the Hodge and Zwank, of great use in displacements, flexions, and fallings of the womb. What could be done for poor women who mangle, iron, wash, cook, and servants of all kinds, without such armamenta? Was it not the fact that our latest authors, our most recent writers on gynecology, are gradually admitting that flexures and their consequences or sequences play a most important part in the causation of dysmenorrhœa and other sufferings that so often women endure during a large part of their lifetime; and he felt pleasure in awarding his thanks to the author of the paper now under discussion, Dr. Graily Hewitt, who has ably pointed out the consequences that follow displacements, and the necessity of restoring the uterus to its proper position, while at the same time he

agrees with Dr. Gervis and others that the length of time many of the patients were kept recumbent must be more or less an evil, and, he thought, should be avoided. He thought the larger number of Dr. Graily Hewitt's cases in the paper before them were anteflexions, and treated by his cradle pessary, an instrument which he (Dr. Rogers) long ago had been obliged to discard on account of the troubles and mischiefs it caused, especially in married life. One of the most common troubles in anteflexion was the pressure on the bladder, and, as a consequence, frequent micturition. Well, this cradle pessary added greatly to this trouble, and as the anterior wall of the vagina was shorter than the posterior, and did not pass up as high, the pessary could not raise up or remove this flexure, and added additional troubles to those already existing. The anteflexion pessary of Dr. Hodge had likewise failed in his hands, while the one for retroflexion had been so eminently successful. It was the disappointments he so often experienced in removing anteflexions that induced him to use Dr. Greenhalgh's elastic internal stem, as also Dr. Wynn Williams's, and other internal stems; and although he well knew that in the early period of their use much mischief and deaths unfortunately had followed their use, and that they had been denounced by the Academy of Paris, by M. Aran. Scanzoni, and other gynecologists in England, he (Dr. Rogers) had at length thought it right to try them, using all proper precautions, by leechings, douchings, baths, and medicaments, to remove congestions or inflammations ere they were placed in the womb, and he had found their use far less dangerous than he had at one time feared; indeed, up to this moment he had not had a fatal case, and only one or two instances had occurred where the instrument was not well borne; with most great relief had followed their use, and he knew of many cases where they were worn for more than a year with signal relief and benefit.

Dr. Savage said arguments long or short were scarcely needed to show the propriety of using stems for uterine

deviations when they really were the cause of suffering, which often was not the case. It was plain that flexions could be redressed by the stem only, and the attending deviation by some additional mechanism to keep the stem in the right direction. Sir James Simpson's well-known contrivance was theoretically perfect; that of Dr. W. Williams nearly so. Pessaries without stems merely kept the uterus out of the vagina, those like that of Hodge effected this best for one thing because they distended the vagina laterally.

A few minutes' attentive consideration over the anatomical relations of the parts concerned would show that pessaries distending the vagina in the contrary direction, if endured, relieved only so long as they were worn, leaving matters worse than before when they were withdrawn; herein was the great fault of Dr. Hewitt's cradle. But, going back to stems, Dr. Savage on a former occasion, the same subject being then under debate, brought to the notice of the Society nine cases of death caused by stems; death in each case being due to rapid peritonitis. The stems then in use were certainly coarse, ill-fashioned things, yet the stems, after the modern fashion, had been the cause of much mischief; he would mention a typical instance, omitting detail, of this. A young married lady, vainly sighing over her unfruitfulness, sought professional aid. The diagnosis was *uterine displacement with narrowing of the cervical canal. Treatment.*—Reduction of the supposed displacement by means of the sound and dilatation of the canal by metallic bougie; this failing a stem was introduced and left there. *Result.*—Within a week pain in the pelvic region, getting worse from day to day, at last tolerable only under the use of opiates, and soon followed by nausea, distaste for food, and rapid loss of flesh. *Consultation.*—The treatment held to be entirely to blame; to be discontinued. Under suitable treatment tardy recovery; when last seen, many months afterwards, the loss of flesh not completely regained.

Practitioners forward in advocating treatment of this kind never seemed aware of disasters of the above sort; not one of the deaths before mentioned, nor any instance of the latter,

had been recorded, a grievous wrong surely done to the profession and to medical science.

Dr. Savage's purpose was not to denounce mechanical treatment in uterine disorders. He was disposed to complain of the heedless prosecution of it; possible disasters ignored, a stem introduced, the patient dismissed there and then. In her subsequent trouble she has recourse to a second practitioner, who relieves her by removing the instrument, and naturally denounces the practice.

Nothing apparently had been said about the important practical distinction between congenital and acquired uterine deviations. The former invariably defied instrumentation, and possibly they predominate in the list of disastrous cases, but who could pretend to diagnose between the two? Flexions soon become irremediable by reason of a thickening of tissue at the bend. In order to introduce a stem great force must be employed, or a way made for it by incising the thickened tissue.

Discomforts attributed to uterine deviations are often curable by attention to health. Such deviations which do not cause partial inversion of the vagina, for instance, and this can hardly be determined by the ordinary digital examination. A single finger is enough, the patient standing. The finger should find the organ movable, but balanced on its tip ; should this come in contact with any part besides the end of the cervix that part is out of place.

Dr. Matthews Duncan was not prepared to make any lengthened statement of his views as he would have wished to do, but he would not let the opportunity pass in absolute silence. The paper and speeches in support of it were of great value, but he agreed with neither the substance nor the tenor of them. It was advantageous to consider displacement without descent, and he would confine his remarks to this limited subject. Displacement without descent was, so far at least, an uncomplicated affection. Descent, in addition to displacement, introduced no new kind of disease, but a changed set of conditions not so simple as those of dis-

placement without descent. Now, he regarded the morbid importance of displacement as very much exaggerated. It would be nearer the truth to say it had little or no importance. Then, the wide range of symptoms attributed to displacement he considered quite unjustified by clinical facts. The treatment of displacement without descent, whether it was desirable or not, was an utter failure.

Mr. Knowsley Thornton.—Though I cannot claim a long experience, like that of Dr. Matthews Duncan, I have paid special attention to this subject, and should like to say a few words. I believe if we could always treat our uterine cases under such favorable conditions as those which attended the treatment of the cases related in Dr. Graily Hewitt's paper, we should always get results as good as he has obtained. The results would, however, have been the same, I think, with such careful feeding, nursing, &c., and occasional replacement of the uterus with the sound, without the use of either special postures or special pessaries.

I think Dr. Duncan has touched the key note of the whole question of uterine displacements, in drawing our attention to displacements without descent, and with it. It is the latter cases only that give trouble, and require our aid, the mere backward or forward displacement is of no consequence. The symptoms which lead to the seeking of our aid are due to the descent and dragging on the ovaries and broad ligaments, with consequent interference with the functions of bladder or bowel. Extreme retro- or ante-flexion without descent may, from mechanical obstruction to the cervical canal, cause trouble, but this is easily remedied by occasional use of graduated sounds.

With regard to stem pessaries I do not believe they ever really cure, and I believe they often do incalculable mischief. Those who put them in do not often see their ill effects; for the patients, finding themselves worse instead of better, seek other advice. I believe those who take out pessaries, as a rule, do infinitely more good and infinitely less harm than those who put them in.

I had some years ago a fatal case of peritonitis due to the use of one of Meadows' stems, though every care was taken in preparing the uterus for its introduction, and it was only in twenty-four hours. It is the only bad case I have had from the use of a stem, and I will take care that it remains so.

I firmly believe that if perfect tables of these cases were published by those who use stem pessaries, tables as perfect as those now published of some great surgical operations, the profession would soon condemn their use entirely.

When they do not do harm they may in some cases give *temporary* relief, but these are the cases of acquired flexion. In the congenital cases their use is always dangerous and they cannot do good. But have we any certain means of diagnosing between an acquired and congenital flexion? If so those who possess the information have never published it!

Dr. R. Cory.—With regard to the danger of stem pessaries, I may say that I have had recently (this year) a case very similar to the one just briefly related by Mr. Thornton. This was a patient, aged 22, who was taken into St. Thomas's Hospital for the purpose of treating an anteflexion of her uterus with a stem pessary. She was kept in the hospital some days before the instrument was introduced. In twenty-four hours after its introduction it was removed on account of pain, and the patient died from peritonitis within ninety-six hours of its removal. In this case every precaution was taken, and at the post-mortem examination no injury to the uterus was found.

The President said that this subject has been so often discussed by the Society, and so many members have taken part in this debate, that he hesitated to trespass on the patience of the Society by any observations of his own, especially as he had more than once availed himself of opportunities of expressing his opinion with regard to it. He could not, however, deprive himself of the pleasure of stating his conviction that Dr. Hewitt's careful and long continued

study of the etiology and effects of uterine flexion, had done much towards improving our knowledge of a really very important class of disease. It was only fair to Dr. Hewitt to admit, moreover, that he (the President) was more convinced of the importance of flexions in producing many very serious forms of uterine illness than he had been previous to a study of Dr. Hewitt's opinions with regard to them. Nothing to his mind was more clearly established than that, in a large number of cases, a flexion was at the bottom of illness and suffering, often extending undetected and unrelieved over a long period of years, and rapidly ameliorated, or even cured, when suitable mechanical means of treatment were adopted. To admit this, however, was a very different thing indeed from granting Dr. Hewitt's contention that flexions were the "fons et origo mali" in all forms of uterine suffering, that they formed the key to gynecology, and that if we knew how to detect a case then we might leave everything else alone. He thought he was hardly misrepresenting Dr. Hewitt if he said that that was pretty much what his views came to, and against any such theory of uterine disease he must respectfully protest. To his mind it was unscientific and unproved, and in the hands of a less skilful and judicious gynecologist than Dr. Hewitt might lead to incalculable mischief. To show, for example, the one-sidedness of this theory, it seemed to him totally impossible that in anything like the number of serious cases of uterine disease as those tabulated in an important and far from uncommon form of disease known as endo-metritis, uterine catarrh, and the like, could possibly have been absent. And in refusing to recognise the importance of such conditions Dr. Hewitt, and all who follow his teaching, deprive themselves of a most valuable aid in treatment, and really prolong the sufferings of their patients. He (the President) was not going to trouble the Society by any exposition of his own views of treatment. His object was to protest, with all the respect that was justly due to Dr. Hewitt's weight and authority, against the adoption of a one-sided theory, and to plead for a catholic and broad view of the subject. It was only

by studying uterine diseases in such a spirit that we could avoid the imputation, not always altogether unfounded, that gynecologists were fond of hobbies, and unscientific and empirical in their methods of treatment.

Dr. Graily Hewitt, in reply, stated, in respect to the observations which had fallen from the President, that a reference to the last edition of his work, published seven years ago, would show that flexions of the uterus were not assigned that exclusive importance which the President's observations would imply. On the contrary, he had all along insisted on the co-existence of an abnormal condition of the tissues of the uterus. The present paper was an amplification of the latter part of the subject. Again, the word "mechanical" which we have used had been frequently misinterpreted. By mechanical was meant the influence of mechanical agencies in bringing about those alterations known as distortions. It did not mean the employment of pessaries in any and every case. Further, though a mechanical treatment might be required, that did not imply the use of a pessary of necessity, for there were other means, position, rest, &c., which were really mechanical in their operation. Dr. Gervis had apparently misunderstood him in reference to the amount of rest which had been enforced in the cases related. It was only in the case of patients who were actually bedridden that such prolonged rest had been required. Other patients less ill were not so restricted. With reference to the necessity for removal of pessaries from time to time, no doubt that was necessary, but his idea on the subject of pessaries was that they acted as the splint does in cases of fracture, and that the object of their employment was to help to sustain the uterus in a proper shape for a considerable time while suitable measures were being taken to enable the tissues of this organ to be strengthened and set in a better shape, and this being the case a continuity of action was essential. Dr. Routh and Dr. Bantock had spoken of the advantages of the stem treatment in cases of flexion. He considered the use of stems a valuable means

of treatment, but he felt bound to say that he preferred other methods. The cradle pessary had been severely criticised by some of the speakers. He could only understand the failure of this instrument in the hands of others by supposing that the instruments had not been made on his own model. He had seen many wrongly constructed, the fault being that the base of the triangle described by the instrument was too long, and the height too little. He had himself used this pessary with very great frequency and for some years, and with almost uniform satisfaction to his patients, as a part of the treatment in cases of anteversion and flexion.

Dr. Bantock's very valuable remarks there was no time to reply to at proper length. A more minute classification of flexions was no doubt required. With reference to the necessity for the use of stems in cases of retroflexion he would assert, however, that he had himself cured very many cases of severe retroflexion by the combined use of his Hodge pessary and repeated unbending of the uterus by means of the sound.

Dr. Rogers appeared to have misunderstood the paper, which was not on cases of anteversion and flexion alone, but on cases of retroflexion also.

In reply to Dr. Savage, he had not found generally a difficulty in the diagnosis of congenital distortions. He agreed with Dr. Savage in respect to the value of examination of the patient in the erect position in some cases. He was surprised to hear Dr. Matthews Duncan's expression of opinion as to the absence of symptoms in cases of flexions unless associated with descent of the uterus. His own experience was that descent of the uterus was almost universally present in cases of flexion, it formed an almost essential part of the disorder. He had seen in extreme cases the fundus uteri actually protrude through the rectal aperture, so low had it fallen; the os uteri was often quite close to the coccyx in cases of forward displacement. As to the possibility of curing cases such as those described in his paper without internal treatment, as Mr. Thornton seemed to

hint at, he could not assent to that, although he considered the general treatment, to which great attention had been paid in those cases, both valuable and indispensable. He would thank Dr. Carter for calling attention to the fact that a principal point in the paper had not been discussed at all by the various speakers.

In conclusion, Dr. Graily Hewitt expressed his obligations to the Society for the consideration the paper had received.

OCTOBER 6TH, 1880.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—40 Fellows and 3 visitors.

Books were presented by Drs. F. Barnes, P. Budin, V. Duchamp, Leon Dumas, Matthews Duncan, Louis Goulard, W. Gillette, W. Goodell, George Hoggan, E. W. Jenks, R. Lefour, W. S. Playfair, A. Rebemont, C. Schröder, and Gaillard Thomas; the University College, London, the Staff of St. Thomas's Hospital, the India Office, the Smithsonian Institution, and the American Medical Association.

Wm. Outhwaite, M.R.C.S., was admitted a Fellow of the Society, and Julius J. Eardley Willmott, M.D. (Weston-super-Mare), was declared admitted.

The following gentlemen were elected Fellows:—Griffith Griffiths, M.R.C.S. (Brynedyn, Swansea); Robt. James Mills, M.B. (Norwich); and Henry Thompson, L.R.C.P. (Hull).

And the following were proposed for election:—Wm. Hankes Day, M.R.C.S. (Norwich); Rd. Charlton Harrison, M.R.C.S.; Wm. Lenton Heath, M.B.; Kanaheiro Takaki, F.R.C.S. (Tokio, Japan); John A. M. Thomson, L.R.C.S.I. (Newport); and Walter Verdon, F.R.C.S.

CASE OF SO-CALLED CONGENITAL DISLOCATION OF BOTH HIPS.

Dr. Poole showed a little girl, æt. 4, with the following history:

The mother was suffering from alarming hæmorrhage, which was due to partial placenta prævia. The head was presenting, but version was performed, and the right leg brought down. As the uterine action was very slight, the hæmorrhage stopped, and another patient in labour, the foot was fastened to a tooth-brush placed across the vulva, and remained thus for about five hours, when pains came on vigorously and the fœtus was delivered with ease. Dr. Poole did not remember whether any traction was applied to the left leg, either by the foot or by the finger over the groin. There was no exhibition of pain after birth, nor any appearance of abnormality in the lower limbs, until the child began to walk, when it was observed to limp, and the right leg was found to be in fault, and to be slightly bent forwards at the knee when in the standing position.

The measurement from the anterior superior spine to the knee was half an inch longer than on the left side.

The child had always had excellent health, and walked and ran without difficulty, but with a waddling, duck-like action. There was considerable lordosis and projection of the abdomen, and the thighs did not touch one another when standing, as they normally do.

A few months ago she was taken to Mr. W. Adams, who pronounced that both acetabulæ were faulty, and that the heads of the thigh-bones moved upwards and downwards instead of being retained in sockets.

Mr. Wm. Adams observed that the little girl now exhibited to the Society had been brought to him by Dr. Poole, and he had no hesitation in saying that it was a well-marked case of the so-called congenital dislocation of the hip-joint, although Mr. Adams believed it would be more accurately described as mal-

formation of the acetabulum, with displacement of the head of the femur. In this case both hip-joints were similarly affected, and the general appearance of the figure was extremely characteristic—the lordosis of the spine, the prominence of the stomach, the large size and prominence of the nates, the shortness of the legs compared with the trunk, and the wide separation of the thighs. The top of the great trochanter on each side, rose above the level of a horizontal line drawn from the anterior superior spinous process when the girl was in a standing position, but when she was lying down and a little gradual extension made from the knee, the great trochanter descended fully as low as it would do in a child with the hip-joint in a normal condition, *i.e.* the base of the ileo-femoral triangle, measuring about an inch and a half whilst the extension was continued in the horizontal position, was quite obliterated when the extension was discontinued or the child resumed the standing position. This was demonstrated to the President and members of the Society. These cases were of especial interest to members of this Society in reference to two points: 1st. The cause of the displacement assigned by some authorities; 2nd., its effects on the production of pelvic deformity. As to the cause, various theories have been adduced, such as spasmodic muscular action, arrested development, traumatic origin, &c. It has been asserted that this condition never exists except in cases of breech presentations, and that the dislocation is then produced by the traction force exerted by the finger of the accoucheur, or the blunt hook employed by him. In Mr. Adams' experience of a large number of these cases the presentations have generally been natural and the labours easy; the children in several instances have been born before the arrival of the surgeon. The evidence against the displacement being produced by the accoucheur was very strong, and Mr. Adams believed the force employed under such circumstances would rather fracture the femur than dislocate the hip, and such an accident has been known to occur. Mr. Adams believed the affection to be essentially a malformation consisting in arrested development of the acetabulum. With regard to the second point, viz. the production of pelvic deformity, this was proved by the dissections recorded in the work of Dr. Carnochan,[1] of New York, who first brought this affection under Mr. Adams' observation in a case which he brought to St. Thomas's Hospital, and demonstrated the conditions to the surgeons in the year 1844, when Mr. Adams was Curator of the Museum. A life-sized model of the patient was taken, and is now in the museum of the hospital.

Dr. Wynn Williams remarked that he would not attempt to

[1] 'On Congenital Dislocation of the Head of the Femur,' by John Murray Carnochan, M.D., New York, 1850.

follow Mr. Adams's very learned disquisition on the subject, but would consider the case from a practical point of view, and that very briefly. In his opinion, after hearing the history of the case and examining the hips of the patient, he could arrive at no other conclusion than that during delivery the ligamentum teres of both joints had been ruptured, and that when muscular action came into play and the child began to move about, the head of the thigh-bone was drawn up against the edge of the acetabulum, causing its absorption and the subsequent dislocation of the head of the femur on the dorsum of the ilium, the head of the bone resting partially on the edge of the acetabulum and partially on the dorsum of the ilium.

Dr. Graily Hewitt believed little was known by obstetricians of the subject now under discussion. He thought it very desirable to ascertain whether, in the numerous cases referred to by Mr. Adams, there was betrayed any history of manipulative traction on the lower extremities during labour, as was the case in the patient whose history had been described this evening, with a view of determining whether traction on the legs has a tendency to cause the condition described as "congenital luxation" of the femur.

Dr. Cleveland thought the diagnosis of these cases of importance, and mentioned that a little boy had been brought over to him from Quebec, wearing an instrument for supposed spinal disease. The nature of the malformation and the uselessness of mechanical appliances were pointed out by Mr. Adams, who saw the case in consultation.

Dr. Gervis thought much care and further consideration of these cases would be necessary before accepting the suggestion that they were due to any manipulation of the accoucheur during delivery. He would like to ask Mr. Adams if spinal lordosis always accompanied these cases, if he had ever examined any after death, and if he had any experience of congenital dislocations of other articulations.

Dr. Herman said that he had seen a case believed to be one of congenital dislocation of the hip in a woman, æt. 30. The diagnosis was made by a surgeon of considerable experience in the diseases of children, who was familiar with these dislocations. On the affected side the curve of the iliac crest was much flatter than on the sound side. This pelvic deformity Dr. Herman thought due to the head of the femur, owing to its being rather further back than on the sound side, exerting pressure at a mechanical disadvantage as compared with the opposite side, and therefore having a less effect in pressing inwards the anterior part of the innominate bone.

ON ROTATORY ACTION IN USING THE FORCEPS.

By Wm. Stephenson, M.D.,
PROFESSOR OF MIDWIFERY, UNIVERSITY OF ABERDEEN.

If the constancy with which the obstetric inventive faculty is exercised in producing modifications of the forceps be taken as evidence of imperfection in the instruments, then they are indeed wanting. Useful as they are in their present form, they cannot but be regarded as still a somewhat rude adaptation of means for the desired end, and they are likely long to continue to be an enticing field for the exercise of ingenuity. A comparison of our present knowledge of the mechanism of labour, with the principles upon which recent modifications have been made, shows clearly that the inventive faculty still moves in the grooves of the older and more imperfect ideas, and has yet made no progress in the direction of recent scientific knowledge.

We know that, in its passage through the pelvic canal, the fœtal head never moves directly onwards in such a manner that its progress can be represented by a simple line, such as the axis of the pelvis, but that throughout there are always imparted to it certain movements of rotation. The opposite ends of a longitudinal diameter never move at the same rate, one end always passes through a greater space in a given time than the other, and when the resistance of the hard structures is met with one side of the head moves more than the other. In the greater part of its progress there are always at least two rotations of the head going on in addition to that represented by the circle of Carus. When the pelvis is narrowed the rotations are increased both in kind and degree. In the case of a contracted brim, where forceps are most likely to be required, the head has thus early three rotations imparted to it, and the facility with which it passes is dependent upon the occurrence of these rotations.

Turn now to instrumental aid by the recently modified

forceps. We find the head firmly screwed up as in a vice, and with it so secured varying ingenuity has been expended to enable us to draw the head by sheer force in a *straight line.* Much emphasis has been laid on the importance of saving the pubis from undue pressure, whilst on the rest of the canal is thrown the whole burden of producing the rotations, and many would increase this work by the unrelaxing grasp and the direct traction of the instrument.

There can be no objection to the endeavour to increase the range of the line of traction, provided this is accomplished without in any way weakening the use of the instrument in other respects. This is attained by the curve of the handles, as in Aveling's forceps, but it is purchased at far too great a cost in Tarnier's and his followers. The intelligent and skilful use of the forceps depends on the quickness of perception in the operator, of the information to be derived from the grasp of the handles, and this cannot but be lessened by separating the traction from the prehensile stems. The power of aiding what we may term the more delicate movements is also thereby diminished if not wholly lost. There is something more required in extraction besides force and attention to the direction of the pelvic canal. The skilful operator quickly discerns every indication of the instrument and modifies his traction and the grasp of the head accordingly. In his muscular and tactile sense should reside the true "indicating needle."

The claim made for Tarnier's forceps, that they permit of free movement of the head "in all directions," is no more true than applies to the ordinary instrument, if the operator attends to the indications which they supply, and does not resist or hamper the movements by blindly pulling in a direct manner only in the axis of the pelvis.

The art of midwifery may be improved by other means besides that of modifying the instrument. We may continue to use the forceps as we have them, and in the meantime endeavour to improve the method of using them by correcting the principles of their management according to the advance of scientific knowledge. There is much room for

improvement in this respect and this paper is offered as a contribution to the subject.

The practitioner, when he has gained some experience, gradually acquires some plan of his own in using the forceps, but as to the principles he is not very clear. The student in a systematic work finds opinions pretty well agree, but it is because of the vagueness and baldness of the discussion of the subject in them. If he compares foreign writers with our own and pursues the subject in the special journals and transactions, he becomes bewildered by the diversity of opinions.[1] There is but one universally recognised principle of action, and that is attention to the axis of the pelvis; it is the sole governing idea of some, and everything else is left to take care of itself. Discussion has more recently turned on the pendulum action. Some condemn, whilst others as strongly defend it. The opponents have good ground when they show it is contrary to the normal mechanism and a fortuitous haphazard mode of action; but they go too far when they include in their condemnation all so-called lever action. On the other hand, the true defence of the lever action is to throw out from the mode of using it all that is haphazard and useless, and give to its employment the scientific precision which can be obtained by a knowlenge of the mechanism of labour.

The term "*lever*" action is objectionable. It has been the cause of much confusion and faulty reasoning, both for and against. It constantly necessitates in the mind the idea of a fulcrum, and that suggests pressure on one particular spot. The term may be nevertheless retained, as short and convenient, but it would be better to drop all arguments based on the analysis of the lever as to fulcrum, power, and weight, and when we speak of lever action mean nothing more than the means of producing a rotatory movement. ROTATORY ACTION[2] is a preferable term, and if a mechanical

[1] See paper on "Pendulum Leverage of Obstetric Forceps," by Albert H. Smith, M.D., Philadelphia, 'Trans. American Gynæc. Soc.,' vol. iii, 1878.

[2] Rotation of the head is used in this paper in a wider sense of the term than that usually applied to it. It is, nevertheless, strictly accurate. Some

principle is introduced in the argument it should be the "couple" not the "lever."

We may lay down as maxims—which no one will dispute—that we should endeavour, in the use of the forceps, to imitate, as closely and fully as possible, the normal mechanism; that we should discard, as far as possible, the element of haphazard, and all movements different from what are found to occur under the natural forces; and that we should work always in the fullest light we can attain by careful and accurate diagnosis as to the position of the head and the form of pelvis, together with a knowledge of the mechanism peculiar to the conditions found.

Following out these maxims we have for our guidance some fully established facts regarding the mechanism of labour. The first is—the forces of labour cannot be reduced to a single resultant, but always consist of a resultant and a couple, the former moving the head onwards as a whole, the latter imparting some movement of rotation. With the forceps we have the power of producing both movements, and as in nature they are always combined so in art they should never be entirely separated.

The opinion so constantly inculcated, that traction should always be made directly in the line of the axis of the pelvis, therefore requires some modification. The operation must be conducted with full cognisance of the direction of this curve, but it must not be the sole governing idea, as it is too apt to be, from the prominence given to it in writings. The so-called pendulum action must be discarded, and rotatory action, as otherwise employed, requires to be determined with greater scientific accuracy than it has yet received. It should not be called in occasionally only, but combined

would limit its use to a rotation on a vertical axis of the head, such as might be imparted to it by turning the forceps on their long axis; but flexion or extension is equally a rotation, on a transverse axis, and these movements are therefore included in the term. That due attention should be given to facilitate and not hinder these rotations is one of the objects of this paper. That we have such a power by means of the forceps properly used the author is convinced, although denied by some.

more or less always with the traction. At the same time it must be employed intelligently with well-determined purpose, and not fortuitously or contrary to the proper mechanism.

The general rule which I would suggest is—*With the onward traction, made in the direction of the axis of the pelvis, must always be combined such a movement of the instrument as will tend to impart to the head the rotatory movement which observation teaches us takes place at the particular stage of the mechanism.*

To carry out this rule requires a thorough knowledge of mechanism and the power of accurate diagnosis. But that is no objection to the rule, it asks nothing more than what every practitioner should possess or can attain to.

Practically, I believe every experienced operator acts, more or less, according to this rule; he arrives at it by experience, and often without being conscious of it. But he no less departs from the principles he has been taught, and, it may be, he is under the belief that he is following. He works from experience only, attained at the expense of many improper trials; why should he not begin to act from knowledge, knowing what he is doing and the proper time so to do?

1. Flexion and Extension Rotation.

In the general directions for the management of the forceps the only natural rotation to which attention is paid is that of the forward turning of the occiput. This even, in great part, is left to take care of itself. No account is taken of flexion or extension, so far as the direction of the force is regarded. It may be said the walls of the pelvis will produce these, as they do when the labour is advancing naturally, that the only change is that a *vis a fronte* is substituted for a *vis a tergo*. There is a fallacy in this often used expression; the conditions are really not the same. The pelvic walls are arranged to work in harmony with a force always acting in one direction, whereas the power with the

forceps is exerted in a constantly varying direction. In addition to this, the head is not so free to move when in the firm grasp of the blades, and must be frequently prevented thereby from performing the natural movement.

In normal labour the head moves by flexion until the occiput is under the pubic arch; *the occipital end moves in a given time through a greater space than the frontal.* With the head in the firm grasp of the forceps, and with direct traction alone, there is always a tendency to produce a parallel movement, and bring both ends through an equal space. I do not deny that if compression be not too great the head can, and often does, glide between the blades, and thereby flexion occurs; but what I contend for is that we cannot calculate upon the movement, the nature of the hold may interfere with it, and the tendency to this spontaneous flexion is least when the need is greatest, that is, when the head is midway between flexion and extension, or where extension exists. It is, therefore, necessary that attention should be paid to secure the movement by the direction of the force. Progress is often arrested from want of a due amount of flexion. In such cases it is surely unscientific to endeavour to facilitate the progress by a force applied in a to-and-fro lateral fashion, when what is required is movement in the longitudinal direction, so as to move the occiput downwards, whilst the forehead remains at the same level, or rises higher up.

Unfortunately, the forceps in their present form are not well adapted to produce flexion in some cases. The vectis is undoubtedly superior in this respect. Still, many cases occur where this movement can be imparted to the head, and where its passage is thereby greatly facilitated.[1] There

[1] Some writers entirely overlook the necessity of producing flexion. Thus Dr. Albert Smith, in the paper above referred to, bases his whole argument against the pendulum leverage, on the assumption that the ovoid of the head presents its smallest diameter to the strait, as seen in his diagram, whereas this is not the case until the occiput is under the pubic arch; before this there is always a greater diameter presenting. By the flexion movement the diameter presenting is lessened, but it is only when flexion is complete that the condition upon which he reasons is obtained.

is an action of the forceps which is not generally recognised which directly favours flexion. In certain positions of the head, the simple act of locking the blades is sufficient to increase the flexion of the head if it is free to move. If more firmly fixed, the movement can still be accomplished by firmly pressing the handles together. The beneficial effect of compression has been misunderstood. It has been supposed to act only by diminishing the diameter of the head between the blades, and its opponents argue that it is useless, as such diminution can be very limited, and, if at all, it occurs only at the expense of increasing the diameter engaged in the narrow part of the pelvis. Compression does enable us to lessen the diameter, but in a way, and to an extent, not realised by either the advocates or opponents. It does so by flexing the head, but it can so act only under certain conditions. It depends upon the position of the blades with reference to the head, and can occur only when the grasp is oblique. It is lost also when traction is made.

To produce flexion, however, chief reliance must be placed in the modification of the rule of traction. Rotatory movement must always be more or less combined with traction, but not from side to side, or now one way, now another. The head under the natural forces is never driven out like a cork from a soda-water bottle, nor does it wriggle out like an eel. Rotatory action must be imparted, but it must be made with steady purpose, in imitation of the natural mechanism.

So far as flexion or extension is concerned we have always a guide in the direction of the sagittal suture, and the rule I would suggest is: *Whilst the force should always be exerted with strict attention to the direction of the axis of the pelvis, the line of traction should be in a slightly curved direction, the curve passing out of the line of the axis in a direction corresponding to that of the sagittal suture, towards the side where the forehead lies for flexion, to the side on which the occiput is for extension.* Flexion movement continues until the occiput engages in the pubic arch; after that the rotatory movement is reversed.

Until the head reaches the floor of the pelvis the flexion rotation is the only one observed where the pelvis is normal. *It is produced by the soft parts alone,* but on this very account it is all the more important that attention be given to it in using the forceps. Because it is produced by the soft parts alone, it is all the easier to derange the mechanism and draw the head down in a parallel manner. Unnecessary dilatation is thereby produced, and especially where we have the cervix to deal with. When not fully obliterated this ring of tissue in natural labour always aids in the production of flexion. It can be readily demonstrated experimentally that the head passes through the os with less force, and with less stretching when the head is free to flex than when the rotation is prevented, and the head is made to pass in a parallel manner. By attention to impart the flexion rotation whilst the head is still engaged in the cervix we have the best means of guarding against laceration of the cervical tissue. If, on the contrary, when operating within the cervix traction is made direct there must always be great risk of injury.

2. Forward Rotation of the Occiput and Lateral Obliquity of the Head.

When the fœtal head comes under the influence of the floor of the pelvis other two rotations are imparted to it. The one is the forward movement of the occiput, but with it the head comes to lie obliquely in the pelvis, the posterior parietal bone lies lower than the anterior. The two rotations take place together, the latter is an important component of the former, and cannot be left out of any accurate conception of the mechanism. Although well known, this lateral rotation has been ignored, yet I am convinced that attention to it in the management of the forceps is of great importance. But the importance of this lesser rotation is not likely to attract attention when the necessity of paying heed to the greater is denied by an

authority of the widest reputation in this country. "It is labour lost," says Dr. Barnes, "it is encumbering nature with superfluous help—it is a sin against that most excellent maxim, *ne quid nimis*, to attempt to promote this turn with the forceps."[1] Against such an opinion I must strongly dissent, and hold that it is our duty to endeavour to bring about this rotation when the occiput is posterior, and not to be content to take an alternative, which though natural is more fraught with danger.

Of the manner by which the occiput rolls forward there is a general misconception, which it is necessary to correct, for without accurate ideas in the mind of the nature of a movement it is not likely that aid will be properly applied when necessary. Much of the differences of opinion regarding the management of the forceps arise out of vague, inaccurate, or erroneous ideas regarding the mechanism of labour.

The generally entertained conception of the movement whereby the occiput rolls forwards is that rotation occurs on a vertical and central axis; that as the occiput turns forward there is a corresponding and equal turning backwards of the forehead; the movement is often spoken of as the "turn of the face backwards into the sacrum" (fig. 1 c). This is not what happens. The movement is effected by the head rolling on the anterior frontal bone, as seen in the diagram (fig. 1 A). In occipito-posterior positions the movement is by a rolling and gliding motion (fig. 1 B). Here the forehead does move backwards, but never into the hollow of the sacrum; it always describes a smaller curve than that of the occiput. To permit of this motion the head must be well flexed, and flexion movement is also being continued. The rotation then is not a simple one on a vertical axis, but composed of a rolling on the anterior frontal bone, flexion of the head, and a rotation on the longitudinal diameter, whereby the posterior half moves more than the anterior.

The manœuvre by which this complex rotation can be facilitated requires careful study, which can only be done

[1] 'Obstetric Operations,' p. 62.

with the forceps and fœtal head in the hand. The following are the principal points to which I would direct attention:

FIG. 1.

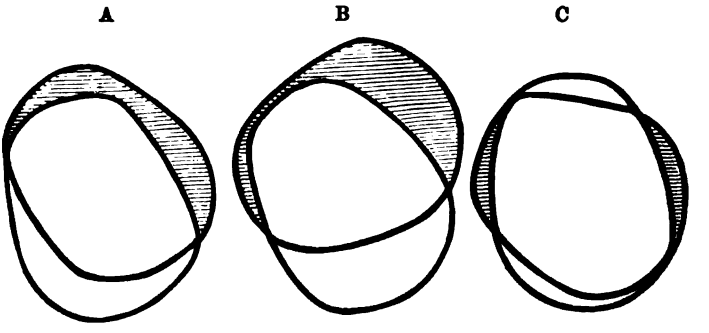

Fig. 1.—A. Occipito-anterior position, head rolls on anterior frontal bone. B. Occipito-posterior, rolling and gliding on anterior frontal bone. C. Illustrates the erroneous idea of the movement.

1. It is simply impossible for the head to perform these movements when in the tight grasp of the blades, so that "the head and the forceps make practically a continuous bar." There must be some gliding of the head between the blades. *When occipital rotation, therefore, is taking place the grasp should be as slight as is compatible with moving the head.*

2. In occipito-anterior positions the movement may be accomplished by a flexion and lateral rotation of the forceps without direct traction.

3. In occipito-posterior positions flexion movement must alone be used until the posterior fontanelle can be reached. Occipito-anterior rotation can only occur with a high position of the forehead; pressure upward on the forehead before and during traction may be of service.

4. When flexion is complete the following points must be attended to to accomplish the forward movement. Traction must be sufficient, and so directed as to bring the anterior frontal bone under the influence of the anterior wall of the pelvis, so as to aid in producing the rolling movement. At the same time the forceps are rotated on their axis, and the

handles drawn slightly towards the side at which the occiput lies; the grasp of the head must be so slight as to permit a gliding of the head in the blades.

5. In simple cases, where forceps are used for inertia of the uterus, little difficulty is experienced in producing the normal movement. But difficulty may arise from other causes, such as extension of the head, a large-sized head, &c. In these cases, attention to flexion and oblique lateral rotation will be found essential and very beneficial; whereas the attempt to accomplish the movement by simply twisting the forceps is almost certain to be futile.

3. Rotations round the Pubic Arch.

The final movement to be considered is the passage of the head under the pubic arch and over the perineum. Here, too, there is need of greater precision in our knowledge and accuracy in our conceptions as to the mechanism, if we are to attain to a scientific use of instruments.

The ideas held and acted on are that the face has turned backwards into the sacrum, that the head wheels round the pubis, and that, in using the forceps, the handles are to be carried carefully forwards in the circle of Carus; with it may be a wavy, side-to-side movement. None of these notions are accurate.

At the beginning of the movement the head lies in or nearly to the antero-posterior diameter of the pelvis only when it is relatively small compared with the pelvis. As a rule, the long axis of the head is in the oblique diameter of the outlet; the nuchæ does not lie directly behind the pubis, but under one of the ascending rami, and revolution takes place first round the ramus. The head is laterally oblique, one parietal tuberosity is lower than the other, and the sagittal suture does not run directly backwards but obliquely towards the sacro-ischiatic ligament. The forehead is not on the sacrum, but presses on this ligament, and it is only when it has cleared it that the face approaches the mesial line (fig. 2 A).

In addition, then, to the wheeling round the pubic arch in the axis of the pelvis, there is a rotatory action, whereby the head from lying laterally oblique tends to regain its direct or synclitic position; the parietal tuberosity which is lowest rises, whilst that which was highest descends, but the former moves through a greater space than the latter. The centre of rotation is at a point on the ramus, on the side at which the forehead lies, and a little above the part behind which the parietal tuberosity lay (fig. 2 B).

FIG. 2.

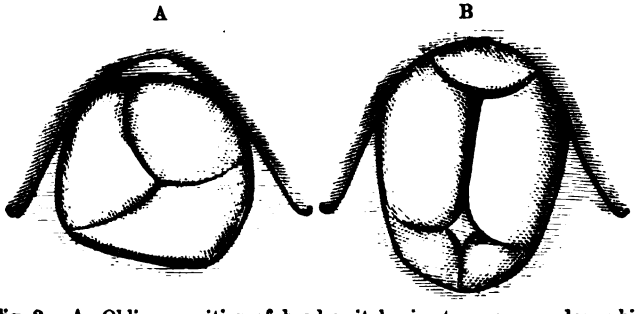

Fig. 2.—A. Oblique position of head as it begins to emerge under pubic arch. A. Position at the end of the movement.

The change in the direction of the sagittal or lambdoidal sutures may be taken as the guide to the nature of the movement required of the forceps. The rule is insufficient which prescribes the action to be directed by the circle of Carus alone. It should be:—*Whilst carrying the handles forward towards the front of the mother, a carefully-applied slight rotatory action should be imparted to the forceps so as to facilitate the changes of the sagittal suture from lying oblique to approach near to that of the mesial line.*

The degree in which this rotation will take place will depend upon the amount of obliquity in the position of the head. Upon the observance of this rotation in giving direction to the force, and not merely "consenting," often blindly, to its occurrence, will in a great measure depend the facility of the passage of the head over the perineum, and there-

fore the safety of that structure. Dr. Wallace, of Liverpool, is the only writer who has drawn attention to this minor rotation at the outlet. He very properly considers it as highly important in preventing laceration, and in cases of delay, when the head is distending the perineum, he recommends facilitating the movement with the hand. Equally important is attention thereto when employing forceps, for the force may readily be applied so as to hinder rather than aid this movement. Just as every practitioner soon learns that he can pass his hand into the vagina or through a partially dilated os more readily and safely by a rotary motion, so the head will more readily and safely pass over the perineum by the action of combined rotation.

4. Rotation on the Axis of the Forceps.

We have seen this rotatory action on the axis of the forceps takes place twice in the normal mechanism. I am inclined to believe that it may occur oftener, to a slight extent, but it is difficult to observe it. It certainly frequently occurs in contracted pelves. Experiment also shows that a slight rotatory action of this kind, combined with the flexion rotation, will often facilitate that movement. I would, therefore, accept it as a principle of general though cautious acceptance, that *slight rotatory action in the axis of the forceps may frequently be used to aid the natural movements.*

With the diagonal hold of the head this rotatory movement enables us to apply the force directly in the axis of the pelvis at the brim, when the line of the forceps is at an angle to the axis of the inlet. The rotation can be so applied as to make one blade descend, with portion of the head in contact with it, whilst the other blade turns only on its axis, and in this way acting as a force in a contrary direction. This is quite different from the ordinary pendulum movement, which moves now one side now the other. The action I describe should be so used as to make one side only, and always the same, move through a greater space than the other.

5. Rotations in Narrowed Pelves.

We have now discussed the subject so far as the normal pelvis is concerned. When we turn to cases of contraction in the canal, we find a greater need and more frequent occasion for the rotatory action of the forceps. Nowhere is shown more clearly the fallacy of drawing only in the direct line of the axis than cases of narrowed brim. Observation and experiment alike teach us that the head never passes through the strait in the direct axis of the inlet, but only by movements of rotation. And yet the sole idea on which the obstetric mind has recently wrought is how may we with the head tight in the grip of the blades draw with greater accuracy in a given straight line. What really is wanted is an improved form of the instrument which will enable us to impart more readily and with greater certainty the necessary rotatory movements.

In this respect the vectis is superior to the forceps. As bearing on this subject and full of interest, I would refer to the experience of Dr. Tarnier. I quote from Dr. Goodell's paper on "Labour in the Narrow Pelvis" (the italics are mine).

"In 1863, the late lamented Fabbri, of the University of Bologna, quickly delivered with the vectis, through an artificial pelvis, a head which Tarnier, *although using all his strength*, was not able to budge with the forceps. The head was then replaced, and the forceps reapplied, but with the same want of success. Professor Tarnier, who is the narrator, then resorted to the lever, and much to his surprise, delivered the head 'with astonishing ease.' This experiment was repeated, and invariably with the same result."

The superiority of the vectis could not lie, in this case, in any greater extractive force; its success, I believe, depended upon the greater facility it afforded of rotating the head.

The late Dr. Forbes, of Aberdeen, once sent for me to assist him in a case. He had tried the forceps, using considerable force, till he said he was both tired and afraid to persevere. I recognised a typical case of flat pelvis, with the

head lying transversely and the fore part dipping into the pelvis. I applied the forceps, drew the handles well to the side at which the occiput lay, then, with a firm grasp of the head, raised them upwards so as to flex the head, and felt that it had cleared the brim. The remark of my friend, when I announced that the head was on the perineum, amused and interested me. He said, "But you have never pulled!" In this case a slight force used in producing rotation was more effectual than a much greater force employed in direct traction.

A general rule, frequently used in the management of the forceps, is to act by rotatory movement in the direction of least resistance; that is, to find out by tentative trials in what direction the head will most readily move, and act accordingly. I agree with Fritsch that such means is of use where the diagnosis is doubtful, or the operator inexperienced. But we should not be content with such a rule, but endeavour to find out more exact principles which will enable us to act with knowledge and not fortuitously.

The mode of action and direction given to the force must be determined by careful diagnosis of the position of the head and a knowledge of the mechanism proper to the conditions found.

I cannot here enter on the discussion of the mechanism of the narrowed pelvis; the points to which attention should be paid may be briefly noticed.

As to diagnosis of position of the head, there should be noted the diameter of the pelvis in which it lies, the degree of flexion or extension, and also whether the anterior or posterior parietal bone is the deeper in the pelvis.

Of the various rotations which are imparted to the head, that upon the transverse diameter is the most important.

If the fore part is dipping, it is advisable to use first slight extension rotation, to secure all the advantage of the movement already indicated by nature, but no great force should be applied in this direction. The head does not pass entirely by extension alone, flexion always follows. Sometimes the forehead again rises, in others it remains at the same level.

The full force, then, should be applied to produce flexion rotation. The movement, however, is not to be accomplished by one sweep, but by slight, repeated action. The curve is not to be that of a circle with the radius of the forceps, but by combining traction with rotation the segment of a different and larger curve is obtained, the traction preponderating in proportion to the degree of flexion existing.

When the posterior fontanelle can be readily reached, and is found to be approaching the centre of the pelvis, flexion is complete.

When the occiput has descended pretty well, but further progress is not made, it sometimes is secured by reversing the action so as to produce extension, and in this way make the fore part clear the brim.

When the head is fully engaged in the brim a slight rotatory action on the axis of the forceps should be made, so as to make the occiput to move either forwards or backwards. If the anterior parietal bone is lower than the posterior (anterior parietal presentation) the occiput should rotate forwards (fig. 3); if the posterior parietal bone is

FIG. 3.

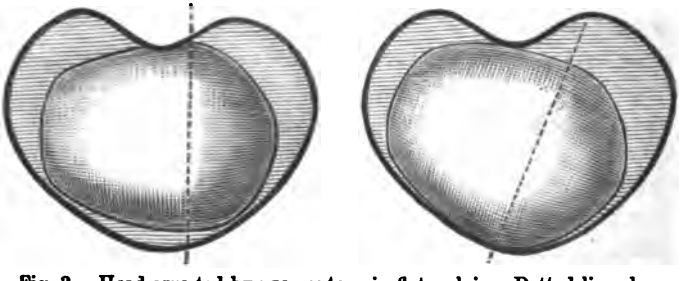

Fig. 3.—Head arrested by promontory in flat pelvis. Dotted line shows direction of rotation necessary to throw head off the promontory.

lower than the anterior (posterior parietal presentation) the occiput moves backwards.

When the head is above the brim, and free to move, the application of the forceps tends to rotate the head from the

transverse to an oblique diameter. This may increase the difficulty of getting the head to engage in the inlet. We have already seen that it causes flexion of the head. The occiput may in this way pass into the inlet, but the head is arrested by the forehead being thrown over the promontory (fig. 4 A). Owing to this cause the frontal bone is often indented or fractured. It is therefore important to note that when the occipital bone has descended below the level of the brim, and is found directed against the anterior wall of the pelvis, in order to clear the forehead and prevent injury to the frontal bone the head should be rotated on a vertical axis, so as to throw the frontal bone off the promontory (fig. 4 B), and at the same time slight extension be given to the

FIG. 4.

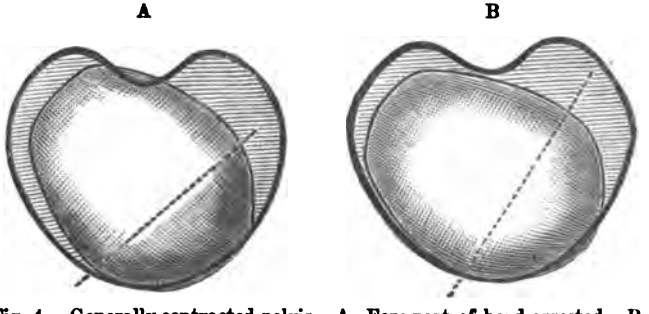

Fig. 4.—Generally contracted pelvis. A. Fore part of head arrested. B, Freed by rotation. Dotted line shows direction of the movement.

head to bring the fore part down at the side of the pelvis. In these cases it will be found that the forceps are very apt to slip, and if they retain their hold, and forcible extraction be made in the axis of the pelvis without rotation, injury to the skull is inevitable.

In the passage of the fœtal head through a narrowed pelvis the rotation on a vertical axis has not been recognised by previous writers. It has been described, but its nature not recognised, by Spiegelberg and Goodell. I have discussed it in the September number of the 'Obstetrical Journal,' and would now again refer to it in connection with

the rotation action of the forceps. It furnishes us with a more accurate conception of the mode by which the head passes the brim, and furnishes us with the means of avoiding, to a certain extent, the indentations of the skull which are frequently met with. These must occur in cases of severe contraction, and are, to a certain extent, inevitable. But by the rotatory movement I have described we have the means of lessening the evil, and in some cases preventing it. Its benefit, however, can only be obtained by making the rotation in the right direction. Its object is to turn the widest (biparietal) diameter from lying parallel to the conjugate into a more roomy oblique position, throwing the firm resistance of the parietal tuberosity off the resisting part of the brim. To secure this in anterior parietal presentations the occiput must be rotated forwards; in the posterior parietal presentations the occiput must be rotated backwards to clear the anterior wall.

Dr. Edis thought the Society was indebted to Dr. Stephenson for having brought the matter prominently forward. It was a subject of considerable importance, more especially to those who had not had much experience in the employment of the forceps. Dr. Edis had frequently met with instances similar to those narrated by the author, where forceps had been tried for long intervals and failed to effect delivery, and yet when slight rotation was given to the head, with due consideration to the mechanism of parturition, extraction was accomplished with but slight amount of traction. This latter action of the forceps was too frequently the only one relied upon.

Dr. Braxton Hicks said it would be impossible, till the full paper was in his hands, to determine how far the rules the author laid down differed from those which most practitioners laid down for themselves. But in one thing he quite agreed with the author, namely, that in a case of dystocia arising from the pelvic bones the traction on the forceps should not be a persistent one in the same lines as were proper in an ordinary pelvis. Where the difficulty arose from the soft parts then traction should be in the normal lines of the pelvis, but in an abnormal pelvis these lines were altered, and therefore we could not continue in them, but must seek those of the abnormal pelvis. To this end it would be necessary to examine most carefully the actual form of the pelvis which has to be dealt with,

and, as far as possible, that of the fœtal head, and the exact want of relationship between the two. This could not be well done but by passing the whole hand into the vagina and making out clearly these points. In these days of anæsthetics there is every facility in operative midwifery for doing this, especially valuable in craniotomy. In these forceps cases, also, it is very needful to make out the type of pelvis, so as to supplement our information. In looking over the abnormal pelves in the Museum of Guy's Hospital, such as might be suitable for delivery by the forceps, Dr. Hicks found that the majority were not those whose reduction of the conjugate diameter was most marked, but those in whom there was a reduction in the diameter running between the foramen ovale and promontory, and from the foramen ovale to the sacro-iliac synchondrosis, while the conjugate diameter was the largest, except the actual transverse. But careful examination with the whole hand would, in general, detect the different kinds of reduction. But it may so happen that we cannot make out the exact difficulty, and therefore we must do what Dr. Hicks thought was the general practice, namely, proceed tentatively, that is, if we have pulled in a given direction fully and find no advance, we alter the direction of the traction, and those who hold the forceps handle not too firmly can always be conscious that there is in one direction or another a line of easier descent. Taking this hint we encourage the movement, not violently, but gently, and even tentatively, and thus we proceed throughout the delivery. And it must be in the experience of most practitioners that during a difficult delivery the direction of the traction has to be altered more than once, independently and out of the direction proper in a normal pelvis and head.

NOVEMBER 3RD, 1880.

WILLIAM S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Present—41 Fellows and 6 visitors.

Books were presented by Dr. S. C. Busey, Dr. G. Hoggan, Dr. Vanden Bosch, Dr. Godson, and the Royal Medical and Chirurgical Society.

The following gentlemen were elected Fellows of the Society:—William Hankes Day, M.R.C.S. (Norwich); Richard Charlton Harrison, L.R.C.P., M.R.C.S.; William Lenton Heath; Kanaheiro Takaki, F.R.C.S. (Japan); John A. M. Thomson, L.K.Q.C.P. (Newport, Shropshire); and Walter Verdon, F.R.C.S.

HYDROCEPHALIC CHILD.

DR. MATTHEWS DUNCAN presented notes of a case of a child born hydrocephalic, with only stumps of arms and with deformity of both lower limbs, and exhibited the child.

Mother aged 18; primipara; full term of pregnancy. The only account she gives of any accident during her pregnancy is that, four months ago, at the bottom of a flight of steps, she slipped one foot, while the other was doubled under her on the bottom step, and she fell back on this, hurting her back and grazing her arm. The injury was slight, did not lay her up, and she soon forgot it.

A month later (three month ago) she received a fright from seeing a dog run over, and to this her mother attributes the deformity of her child. The sight of this dog, which is frequently in her neighbourhood, and which is much deformed by its injury, always causes her to shudder.

Her general health has been good during her pregnancy. No history of deformity in her family, a married sister having children which are quite normal.

Labour began regularly about 9 a.m. on Thursday, 28th October. At 9 p.m. the student who first saw the case, when the head was high up, diagnosed a breech presentation, and sent for assistance about 10. Mr. Heath saw the patient about 10.30, and then the presentation of vertex was easily made out. The head was well engaged in the pelvis, and was advancing steadily, though it seemed large, and there was much overlapping of bones, which felt very soft. The pains were regular, and the labour went on well, and terminated at 12.45 a.m. on Friday 29th, by the natural process.

The child had some convulsive movements after its birth, but did not breathe until the student in attendance flicked it once or twice. Since its birth the child has done well, taking the bottle regularly, and crying when disturbed, just as a normal child would. It passes its motions and urine naturally.

Description of child.—Body that of a well-developed child at term. Head slightly hydrocephalic, all the sutures being separated much more than natural, in some places to half an inch.

The frontal suture is separated to the bridge of the nose; the coronal and sagittal will admit the finger.

The anterior, posterior, and lateral fontanelles are all enlarged.

Measurements of head.—Weight on eighth day 5 lb.; circumference 16¼ inches; occipito-frontal diameter 6 inches; bi-parietal diameter 4⅞ inches; bi-temporal diameter 4 inches. Taken two days after birth, October 31st.

Both arms present the appearance of being amputated in

utero. The *right* measures $1\frac{3}{4}$ inch in length, and at its end presents two little fleshy tubercles, one as thick as a crow-quill, sessile, and about $\frac{1}{4}$ inch long; the other, close to it, is as big as a large-sized pin's head, about $\frac{1}{8}$ inch long, and fixed by a slender stalk. Neither of these tubercles show the least resemblance to a finger, nor have they any sign of a nail on them. The *left* stump measures $2\frac{3}{4}$ inches, and the whole humerus is apparently present, as what seems to be the internal condyle can be felt at the inner side of its distal end. At the outer end of the stump a sharp point of bone is continued on in the direction of the radius for half an inch, and is covered by a small palm-like flap of skin as big as a field bean, but there is no sign of an elbow-joint to be detected.

The pelvis seems normal, except that the acetabula (if they really exist) appear to be thrown further back than natural. The external genitalia are normal.

The femora are short, flexed, rotated outwards, and adducted, so that the knees are within half an inch of the anterior superior iliac spines.

Heads of femurs can be felt rotating in region of thyroid foramen.

The *right* foot presents the condition of equino-varus, but the *left* is in an extreme state of calcaneo-valgus.

On the outer side of the right leg there is a small blind pit, one third of an inch long, the origin of which is uncertain.

At present the child seems thriving.

CASE OF PYOMETRA.

Dr. Galabin showed microscopic sections of the uterine wall from a case of pyometra in a woman, aged 70. The patient died a few days after an operation for strangulated hernia. It was noticed during life that she had a purulent discharge from the vagina, but there was no other history of

uterine symptoms. At the autopsy the body of the uterus was found distended into a cavity three inches in diameter, and full of pus; there was no obstruction to the outlet through the cervix. The internal surface of the uterus appeared to be intensely inflamed, and there was nothing in the naked-eye appearance to indicate the presence of cancer. In microscopic examination nothing but infiltration with leucocytes was seen in most parts. But sections being made near the internal os, where the surface appeared somewhat ragged, evidence of carcinoma was found at one corner of the section. The ragged surface showed an appearance of club-shaped villi, the spaces between them apparently being due to the cells in the carcinomatous alveoli having become disintegrated.

This case showed that pyometra, with distended uterine cavity, might be really due to malignant growths in the uterine wall, even when the appearance to the naked eye, and even to microscopic examination, unless the search were very extensive, was merely that of inflammation. He thought this case might be compared with one reported last year by Dr. Matthews Duncan, in which the course had been an apparently malignant one, but in which Dr. Thin had found only infiltrations of the uterine walls with pus-cells. He had been permitted to examine that specimen, and thought that some parts of it were open to the interpretation that there was sarcomatous new growth present, and not solely inflammation. At such spots the cells were angular, and larger than leucocytes, and had a fibrillar stroma among them, not like the separated muscular fibres of the uterus. Sometimes also processes were seen uniting the angles of the cells to the stroma.

Dr. Galabin thought it was in accordance with analogy that the uterus did not become distended by any obstruction to overflow through the cervix, unless the obstruction were absolute, but might become distended through disease of its walls without any obstruction to outflow. In the case of the bladder, stricture of the urethra led to a small contracted bladder, not to a distended one, while in cancer of

the walls of the bladder a large cavity with hard walls might be formed.

Dr. Galabin also showed microscopic sections from Dr. Godson's case of ruptured tubal fœtation, which had been referred to Dr. John Williams and himself for report.

AN ANENCEPHALOID MONSTER.

Dr. Culver James showed an anencephaloid monster. He said, "I was summoned to Notting Hill by a patient of Mr. Wood-Hill, who was out of town, on the 18th September, 1880. On my arrival, I learnt that the child was still-born, was a case of breech presentation, and that the mother had been pregnant for only seven months.

"The monster, as you will see, is a good specimen of the anencephalous class. The upper part, sides, front, and back of the cranium are wanting, as well as the arches of the vertebral column as low down as the angles of the scapulæ. And there appears to be an entire absence of the cerebro-spinal system. The base of the skull and the spinal canal are covered with a membrane continuous with the integument, which, however, is sharply defined. At the anterior part of the base, on each side of the median line, and beneath the membrane, are two small masses of soft pulpy material, in which, however, I have been unable to discover nerve-cells. The face is low down on the trunk, between the shoulders, and the skin of the chin is continuous with that covering the sternum. The eyes are large and prominent. There is no superciliary ridge. The fœtus is female, and its trunk in other respects well developed.

"*Family history.*—Father and mother fairly healthy, but both are thin and anæmic looking. No history of syphilis or phthisis. The mother is twenty-six years of age and has had four children, only one of which is now alive. One died when two years and seven months old, and two premature only survived their birth by a few hours. There is no reason

to suppose that she had been frightened during her last pregnancy.

"Had the case been one of head presentation, and had the accoucheur been present at the birth, the absence of the cranial vault would have made the diagnosis exceedingly difficult."

Dr. Heywood Smith presented to the Society two photographs of a young woman, aged twenty-eight, whose mother was frightened by a monkey about the fourth month of utero-gestation. The likeness profile showed in a remarkable way the general concavity of the face, ending in a marked prominent under jaw.

Dr. H. Smith asked the Society how it was that alterations, supposed to be due to maternal impressions, were so often referred to the third or fourth month; whereas among animals it was at the moment of conception that the mother was supposed to receive an impression.

Dr. J. Braithwaite observed that he had met with a puppy dog having a flattened and bifid fore-foot, the owner of which said that during the bitch's pregnancy a stone had fallen upon her foot and crushed it similarly to the flattened foot described.

Report on Dr. Godson's Specimen of Ruptured Tubal Fœtation.

The specimen consists of the uterus and both ovaries. The uterine cavity measures $2\frac{5}{8}$ inches in length, and the lower part of the cervix is occupied by a plug of mucus. The body of the uterus, measuring $1\frac{1}{4}$ inch in length, is lined by a decidua about $\frac{1}{8}$ inch in thickness. The decidua is red and soft, and is slightly detached in places. The right Fallopian tube, at about its centre, is distended into a sac, 1 inch in its greatest or longitudinal diameter, and filled for the most part by what appears to be clot. On the anterior face of the sac

is a rupture about $\frac{1}{16}$ inch in diameter. About the centre of the apparent clot is an elongated cavity, $\frac{3}{8}$ inch in length, having a smooth lining. A piece of tissue taken from a little outside this cavity shows the presence of chorionic villi in abundance.

Microscopic sections have been made, including the wall of the tube and the clot in continuity with it. The clot is shown to be for the most part in contact with the muscular bowel of the tube, without any intervening layer of decidual cells. At some points; however, some cells are seen near the inner surface of the tube, and a few large cells are dispersed among the clot in their vicinity. A few sections of villi are seen very sparingly amongst the clot. The thickness of the wall of the sac is generally not more than $\frac{1}{24}$ inch, and in some places much less. At its thicker part branching glandular cavities, lined with cylindrical epithelium, are seen in its wall.

Near the surface of the right ovary is a smooth-walled cyst, $\frac{3}{8}$ inch in its greatest diameter, with a shrunken clot free in its centre. Its walls do not show any of the development which takes place in the production of a corpus luteum. There are traces of old corpora lutea, apparently those of menstruation, in both ovaries, but no recent corpus luteum in either.

The uterine appendages show no signs of any adhesion. The right Fallopian tube being divided between the sac and the uterus, a bristle can be passed outward along the tube nearly up to the sac, but not into it, and inwards nearly up to the inner wall of the uterus.

From the small size of the apparent amnial cavity we consider that the embryo could not have reached more than about three weeks' development at most.

JOHN WILLIAMS.
ALFRED L. GALABIN.
CLEMENT GODSON.

A CASE OF CHOREA IN PREGNANCY SUCCESSFULLY TREATED BY DILATATION OF THE OS UTERI.

By W. F. Wade, M.B., F.R.C.P.,
PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM.

(Communicated by Dr. Malins.)

The mortality of chorea when it occurs during pregnancy is, according to the statistics presented by Dr. Barnes in his classic paper,[1] about 30 per cent. This is very far in excess of what obtains under other circumstances, the mortality, according to Sée, being about 6 per cent. Without being able to quote actual figures, I have no doubt that in Birmingham, where the disease is very rife, the death-rate is very much lower. This high fatality enhances the interest attaching to any therapeutical suggestion.

That chorea is not merely an epiphenomenon as regards the pregnancy, is perhaps suggested by this high death-rate. But it is still more strongly shown by the fact that choreic pregnant women have reached an age when simple chorea is very rare, and it is again enforced by the fact that, even in favorable or, at least, non-fatal cases, the choreic movements often do not cease till the uterus has been evacuated. It is true that cases have occurred in which the chorea did not appear till after delivery, but as these cases are not only very rare, but in the only two I know of very exceptional in their character, we scarcely can treat them as other than medical curiosities.

In Romberg's case the symptoms commenced "subsequent to a heavy and tedious labour," and had remained of a very severe character for nine years, when she came under his notice.

In Ogle's case the symptoms "came on shortly after the last confinement," and lasted for four years, when she died from the exhaustion produced by them.

[1] 'Obstetric Trans.,' vol. x.

At any rate, admitting the possibility of an excentric origin of chorea, it is not difficult to imagine that in these two cases the equilibrium of the uterine system had not been restored, and that the chorea in each of these cases had a uterine point of departure.

Without desiring to discuss at length the so vexed a question as the pathology of chorea, it is difficult to avoid some reference to it. In spite of the persistent ability which has been expended on the support of the embolic hypothesis, it does not appear to command the assent of the profession. One of its main bases is the frequency with which chorea and rheumatic heart disease are intermingled, and this is a clinical fact which cannot be disputed by English observers. But, on the other hand, we find in Romberg the following passage:—"I have never omitted examining the heart in chorea patients, even when there was no functional disturbance to draw attention to the organ; but, with the exception of two cases, in which the complication was accidental, and in one of which it was only observed after the fifth relapse, brought on by a rheumatic attack, I have not found chorea accompanied by disease of the heart." Such a statement is only explicable in one of two ways. Either Romberg is a totally incompetent auscultator, or the relation of chorea to rheumatism and heart disease are quite different in Berlin and England. And, in the absence of other evidence, I must assume, on the authority of Romberg, that this difference exists.

It is curious, on the other hand, that the supporters of the embolic hypothesis have failed to observe a clinical fact which would be a really useful addition to their arguments. All writers advert to the more or less complete replacement of the choreic movements by loss of power. Observations made before the embolic hypothesis was originated by Kirkes, showed me that loss of power is often a very early concomitant, in some few cases absolutely preceding any irregular movements. As to the connection between chorea and rheumatism, I have seen one preceding the other at different intervals, and one intercurrent with the other. If I were

compelled to draw an inference from what I have seen, it would be that rheumatism is, like chorea, primarily a result of disorder of some nerve centres.

The observations of Dr. Dickinson[1] serve to show what we should be inclined to admit on other grounds, that more than one of the grey tracts are implicated in at least many cases of chorea. But when he asks us to assent to the proposition that this alteration consists exclusively in vascular change, I find a difficulty in admitting that what may be found after death is necessarily existent in all the slighter cases which do not die, and, moreover, the vascular changes may be due to the hyperaction of the centres supplied by those vessels. I have noticed in fatal cases for some time before death, congestion of the cheeks, of the conjunctivæ, of the tip of the nose and edges of the nostrils, and of the forehead. And when I see this I am always anxious about the result; when by treatment such a case is reduced to the ordinary choreic case, this congestion generally soon disappears; this occurred in my present case. This fact suggests that there may be internal disturbances of the capillary circulation in severe or fatal cases which do not exist in the more common examples.

On the whole, then, it appears to me that we have to admit that we are not in a position to explain the pathology of chorea. For to say that certain nervous centres are in an unstable condition is really only stating in another shape that certain muscles are incoherently agitated. But we have some other clinical facts about it; one very important one is that chorea may be, but perhaps rarely is, excited by local irritation; thus Romberg mentions a boy who rapidly recovered after the evacuation of a quantity of ascarides. Another point is the effect of emotional excitement. Romberg mentions a girl who was violently alarmed by a dog jumping and barking at her; she was seized with chorea the same evening. The influence of emotion may be constantly seen to exacerbate the movements. I have often found a patient, who seemed to me to be getting no better, whilst the nurse

[1] 'Med. Chir. Trans.,' vol. lix.

testified to a steady amendment. The fact being, that often the doctor's visit produces agitation. It sometimes, but more rarely, has the opposite effect, and uncorrected observation would lead one to believe in improvement which did not exist.

The chorea of pregnancy may be affected by emotion. Some years ago I had a severe case which had by treatment been all but subdued, a bed-side bracket, on which were placed bottles and crockery, fell down, with a crash, the chorea returned in all, or more than all its previous vehemence, and in about forty-eight hours after she was dead.

In the present case repeated inquiries by the nurse led to the conclusion that the girl was not affected by the anxiety which her social circumstances were calculated to induce.

The aspect and other symptoms of the patient led me to apprehend the possibility of a fatal issue, and the prognosis was not rendered more favorable by the fact that drugs did not seem to exercise control. I am quite willing to admit that the chloral and bromide and Indian hemp, which on the whole are the remedies most likely to benefit such a condition, were not given very freely.

The great success which has been obtained by dilatation of the os uteri in the sickness of pregnancy (though I have not had the opportunity of seeing this myself) led me to think that it was not unlikely to be beneficial in what there are grounds for thinking may be an analogous disorder.

There was one very special recommendation about this plan, namely, its very speedy result. The proceeding has not been found to be dangerously provocative of abortion, and if it were, we know the frequency with which chorea is attended by this accident, and I had a real anxiety about the life of my patient.

I accordingly asked my obstetric colleague, Dr. Malins, to dilate the os.

On the first trial I was anxious to avoid vitiating the experiment by the use of chloroform, and the movements of the girl were so violent and incessant that Dr. Malins told me at the time that he had very imperfectly succeeded.

Still it was thought better to wait and see the effect; this was not favorable, any good effect was evidently more than counterbalanced by the emotion excited. On the second occasion the result was most markedly satisfactory; that this was not due to the chloroform is, I think, shown by an excess of disturbance between the operation on the third occasion and the improvement which then set in. It is moreover an ascertained fact that chloroform inhalation does not act as a permanent sedative of choreic movements. There is a just prejudice against drawing inferences, especially therapeutical ones, which are so liable to be fallacious, from single cases.

I think this case is fairly free from fallacy, and may justify the adoption of the plan again. At all events, chorea in pregnancy is so rare a disorder that it is quite likely I may not have another opportunity for treating it, and this will probably be taken as a reasonable excuse for reporting this case.

Case (reported by Dr. Malet, House Physician).—M. E—, æt. 19, unmarried, in about the seventh month of her first pregnancy was admitted into the Birmingham General Hospital on October 1st, 1879, suffering from very severe chorea.

She had rheumatic fever two years ago, with this exception, has always been a very strong, healthy girl. Family history, so far as it can be made out, is good; no chorea.

Three weeks before admission began to have involuntary movements of the right hand, which caused her to cut her fingers at her occupation of cartridge making, which she was obliged to leave off. The right leg and then the left arm soon became affected, the left leg she thinks never did so. She became rapidly much worse and came to the hospital. On admission Dr. Malet ordered her two grains of sulphate of zinc three times a day in water, and fifteen grains each of chloral hydrate and bromide of potassium every night. A faint systolic bruit was heard at the apex.

She became progressively worse, nights almost sleepless, excitability extreme, the whole body, except the left leg,

which moves but little, is in almost constant motion, which becomes very violent on the least excitement; speech in somewhat difficult.

On the 18th she was ordered half a drachm of ammoniated tincture of valerian with fifteen minims of tincture of Indian hemp in a mixture every four hours, and an attempt was made to dilate the os uteri with the finger; the violence of the movements prevented this being done efficiently. The ensuing night was, if possible, worse.

19th.—Took twenty-five grains each of chloral hydrate and bromide of potassium at bedtime, and the night was somewhat quieter.

20th.—Bowels not having been opened since the 18th, was ordered a colocynth enema, followed by four grains of Dover's powder every four hours; continues very violent.

21st.—At 11 a.m. was put under the influence of chloroform and the os uteri well dilated, and all other treatment omitted; very marked improvement during the day, and she had a sound night's sleep, only waking two or three times.

23rd.—Continues very much improved, resting well at night. The bowels not having acted since the 20th, they were well opened by colocynth enema.

24th.—Tossing about a good deal, not at all so well as on the three preceding days, but slept well at night.

25th.—The os uteri again dilated (under chloroform). Towards evening she seemed rather worse than yesterday, but slept well at night.

26th.—More movement this morning.

From this time forward rapid and steady improvement, so that she was soon up and able to do needlework without pricking her fingers, although there still remained a little twitching of the right fingers, and when conscious of being watched a little fidgetiness; these symptoms remained up to the date of her discharge. The only other treatment was an occasional dose of castor oil.

The urine was frequently examined, on one or two occasions a very slight trace of albumen was detected. The urine was for the most part alkaline and phosphatic. She was kept in

the hospital till November 20th, and then dismissed with an injunction to return at once if any relapse occurred.

March 17th, 1880.—Was seen to-day with a fine healthy baby nearly three months old; she is in excellent health without any trace of chorea. She remained in the same state as when discharged until after the birth of her child, when all traces of irregular muscular action disappeared.

Dr. ROUTH asked to what extent had the os been forcibly dilated? Was it in any way lacerated? for, if so, this might account for the sickness which followed.

Dr. MATTHEWS DUNCAN felt greatly the want of exact information as to what was meant by the "thorough dilatation" mentioned in the paper as having been twice performed. He did not know how far the dilatation went, or how it was done. The paper said nothing on these important details. He would add that he regarded thorough dilatation, as he understood it, as a very sure cause of miscarriages. On the question of the value of the treatment he made no remark.

Dr. AVELING had seen reflex vomiting from abrasion of the cervix uteri cured by the application of a solution of nitrate of silver, and thought medication should be first tried before dilatation.

Dr. FRANCIS TAYLER related the case of a boy who suffered from chorea so severely that he could neither talk nor stand. Drug treatment having failed, he advised that the boy should be taken to a hospital so as to remove him from his surroundings. He was accordingly taken to Guy's, where he remained in the taking-in room for some time. He was not admitted, but on his return home his mother discovered that all choreic movements had ceased, and they did not recur. So sudden a recovery as this seemed incompatible with so coarse a lesion as an embolism. It would also show the necessity of exercising great caution in drawing conclusions from the results of mechanical treatment, which might act strongly on the emotions of a hypersensitive patient such as this young woman probably was.

The author, who was unable to be present at the meeting, has since furnished the following information:

"The dilatation was effected by introducing two fingers through the os, and forcibly separating them to the fullest extent, total dilatation being about 2½ inches."

EDITOR.

ABSENCE OF THE VAGINA; UTERUS DISTENDED BY RETAINED MENSTRUAL FLUID. OPERATION. RECOVERY.

By Charles H. Carter, B.A., M.D. (Lond.), M.R.C.P.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN.

Cases such as the one I am about to describe are very rarely met with. But a few such are recorded in medical literature. Our own 'Transactions' give an account of only four cases in which there was menstrual fluid retained in the uterus dependent upon congenital absence of the vagina. In three of these, related in vol. iv, one by Mr. Baker Brown, two by Dr. Braxton Hicks, the distended uterus was emptied by puncturing with a trocar through the rectum. In the fourth case, reported by Dr. Routh in vol. xii, a new vagina was successfully made, but the patient unfortunately died on the 7th day from rupture of the right Fallopian tube. Dr. Emmet, of New York, in his work on 'The Principles and Practice of Gynæcology,' relates seven cases of congenital defect of vagina, in six of these there was entire absence of the vagina, and one with a transverse septum high up. In this latter case, and in two of the six with the vagina absent, the uterus was distended by the retained menstrual fluid.

Absence of the vagina, where the uterus is either rudimentary or entirely absent, is more frequently met with. So also are cases of retained menstrual fluid depending upon occlusion of the vagina, &c., dependent upon injuries at the time of labour, from accidental causes, or the result of some inflammation.

In July, 1878, E. S—, æt. 16, attended as an out-patient at the Hospital for Women, and was seen by Dr. Holland. She complained of pain in the lower part of the abdomen, which had come on latterly every day about 4 p. m., and lasted two to three hours. This pain first began two years previously, when she was seized with a severe pain in the

back; the pain recurred daily or almost so, and was very sharp, lasting from ten to fifteen minutes; after a time the pain became more continuous, and came on every afternoon and lasted a longer time, the position of the pain shifting to the front of the abdomen. She had never menstruated. On examination, the urethral orifice was large, the sound in the bladder detected nothing abnormal; no vaginal orifice could be made out. By rectal examination the finger felt the sound in the bladder with only a thin layer of tissue intervening; about 1½ or 2 inches up the rectum the finger came upon a rounded, tense, elastic mass, this mass by pressure in the hypogastric region was movable, and could be pressed down upon the examining finger, and the mass could be felt reaching half way to the umbilicus, about the size of the uterus, enlarged at the third or fourth month of pregnancy.

The patient was admitted into the hospital, under my care, on July 17th. She was a tall, well-developed, healthy-looking country girl, though very thin and somewhat anæmic. She had previously enjoyed good health, having had no other illness than scarlet fever at the age of five. During the year 1877 she had been for a time in Northampton Infirmary, where she says she was treated for neuralgia of the spine, and given hypodermic injections of morphia to allay the pain, which did nothing more than postpone the attacks, as they came on as she passed from under the influence of the drug. The mammæ were well developed, and the pudenda normal; the mons veneris and clitoris fairly developed, and the labia natural; the mucous membrane passed smoothly from the lower margin of the urethra to the posterior fourchette, about ¾ of an inch. The abdomen was resonant, except just above the os pubis; during the paroxysms of pain the tumour could be distinctly felt in the hypogastric region as a hard mass, reaching nearly half way to the umbilicus, with a raised thickening at each corner, passing outwards to the sides of the pelvis (which were supposed to be the Fallopian tubes distended, but may have been only coils of intestine full of flatus). The other points in the examination were the same as described above. All the

other organs were natural, and the functions of the body naturally performed. After a consultation it was decided to make a vagina.

On July 25th, at 2 p. m., the patient was anæsthetised, and a sound having been passed into the bladder and drawn upwards by an assistant, I began the operation by making an incision from above downwards, from a little behind the meatus urinarius to the fourchette; the knife was then directed laterally for a few cuts, after that, guided by a finger in the rectum and the sound in the bladder, now using a director, then, and mostly the finger, a passage was made by tearing through the tissue till the hard mass was reached, at about three inches from the vulva, and it was evident from the feel of the part that there was no more tissue to tear through, and that I had come upon the wall of the uterus. The finger was now able to be moved over a considerable area of the mass, but no cervix uteri, or anything resembling an "os," could be detected. I now decided to aspirate the fluctuating mass, and the largest needle of the aspirator was pushed in, but only a small quantity of very thick treacly matter could be drawn through it; on withdrawing it, a quantity of the same thick, dark brownish-red semi-fluid material escaped. I then passed a director into the uterine cavity through the opening made by the needle of the aspirator, and with a blunt-pointed bistoury cut through the walls laterally, and from above downwards. A very large quantity of the treacly matter poured out, about 10 oz. The finger was then passed into the cavity of the uterus, dilating the opening still more, and moved round to feel if there was anything like a cervix or an os uteri to be made out on the wall of the cavity; neither could be recognised, so that it was impossible to say at what point the uterus had been punctured. A pad of cotton-wool, fixed with a T-bandage, was applied, and the patient put to bed, and ⅓ gr. morphia suppository administered. Scarcely any blood was lost at the operation. The patient complained of very severe pain in the abdomen about two hours after the operation, and on changing the dressing at 6, a large quantity of the same semi-fluid material (several ounces) was

found to have been expelled. The dressings changed at 8.30, were found soaked with red blood recently effused. Temp. 99·7°; pulse 124.

26th.—The patient passed a good night, sleeping comfortably; on changing the dressing a considerable quantity of dark clotted blood, quite different from that removed at the operation, evidently blood that had been effused from the wounded surface and then ran back into the uterus and expelled, was found. The uterine cavity was washed out with carbolic lotion (1-80). The patient took her food well; complained of no pain or abdominal tenderness. Temp. 99·2°; pulse 124.

27th, 10 a.m.—Patient doing well; passed a good night; has a little pain in the inguinal region; temp. 99·4°; pulse 112; a little hæmorrhage on the dressing. The finger passed without difficulty, but with pain, up the new vagina; the opening into the uterus was much contracted, admitting only the tip of the finger. The vagina was ordered to be syringed out twice daily with carbolic lotion, the finger introduced into the vagina, and the thick sound passed into the uterine cavity.

The patient went on well for the next three days; the temperature not higher than 99·4°, night or morning, and the pulse ranging from 96 to 116. In the evening of July 30th the temperature rose to 101·8°, the pulse 120, and she complained of much pain in the hypogastric region and inability to pass water. The next morning, as the pulse and temperature remained high, the uterus was washed out with carbolic lotion by means of the double-current catheter, and after about four ounces had been injected the fluid returned quite clear. The urine contained mucus, and was thick and ropy, most probably depending upon the use of the catheter the first few days. For the next few days the temperature ranged from 100° to 100·8° in the morning, and 101° at night, the pulse keeping up to 112 to 130, and some hardness and tenderness were noticed in the right inguinal region. By rectal examination the uterus was much diminished in size, but tender. All this passed off, and the patient so improved

that she was out of bed and on the couch on August 7th. This improvement continued, and on the 26th the following note was made:—The general condition of the patient much improved; she eats and sleeps well; has no pain or tenderness in the abdomen. The uterus has been washed out daily with carbolic lotion, and what comes away is chiefly mucus. The new vagina is lined with a cicatrix, which resembles mucous membrane continuous with that from labia minora. The sound passes backwards with a very slight hitch (but without requiring any force to overcome the obstruction) at what seems to be the artificial os uteri, the whole distance from vulva three inches and a quarter. By rectal examination the uterus appears larger than normal, and lies backwards.

From September 4th to the 6th there was a slight coloured discharge. On the 13th the double-current catheter was passed, and the uterine cavity washed out with carbolic lotion; there was some difficulty in doing this as the passage had contracted considerably at its upper part, and the opening into the uterus was smaller.

On October 11th the patient was sent to a convalescent home, her general health good, having gained flesh considerably during the last few weeks. The new vagina had narrowed a good deal, and only admitted the finger for about three quarters of an inch; it had been kept patent by passing a thick sound daily into the uterus. I intended on sending her out to take her back at a later period, and if needful dilate the passage.

On the 22nd the catamenial discharge came on very profusely, lasting a week. This occurred again on November 16th less profusely, and lasting four days. She presented herself for examination on the 26th, and the sounds were passed as before, the passage was more contracted, but easily dilated by passing the thick sounds; the opening into the uterus would not admit without great pain a sound larger than No. 10. She then went home to her friends in the country.

In April, 1879, her mother wrote saying that she was in

exceedingly good health, menstruating regularly without any pain or difficulty.

On October 3rd, 1879, her mother brought her to see me. She had grown taller, and was stouter; was regular, the period lasting four days, and without any discomfort. On examination the vaginal opening admitted the finger about three quarters of an inch, then it narrowed, allowing the passing of the ordinary sound a short distance, but not into the uterus, but a small-pointed sound could be passed three inches and a half into the uterus; by rectum the uterus was lying backwards, and was not larger than natural, though somewhat harder.

As her general health was good, and the patient menstruated regularly and without pain or any difficulty, and as this had gone on for twelve months, I did not deem it needful to interfere or to propose to dilate the passage then, but told the patient and her mother that if at any time any difficulty arose in menstruation she should at once communicate with me. The mother then referred to the probability of her daughter's being engaged to be married, and if such should be allowed. I gave my opinion that such a proposal could not be entertained, as if conception occurred it would be quite impossible for delivery to take place *per vias naturales*, and the life of the patient would be seriously endangered.

In March I again heard from the mother saying her daughter was well.

The case above recorded would by itself afford but little basis for laying down a line of treatment in similar ones, but taking it with others, as those recorded by Dr. Emmett, of absence of vagina with the uterus distended by menstrual fluid, and the one related by Dr. Routh, we may conclude that the best mode of treatment is to make a passage to the distended uterus in the manner above described, and to open it by a wide aperture. Dr. Emmett, with whose cases and remarks I have only recently become acquainted, advises that the opening up of the canal be made at one sitting, and that it be made by tearing through, and so separating the tissues,

by sweeping the finger from side to side, to give a free exit to the retained fluid, and then to wash out the cavity so as to avoid blood poisoning. Dr. Routh adopted a similar procedure in his case. The advantage of a free opening into the uterine cavity was shown in this case, where uterine contraction coming on a short time after the operation a further quantity of the retained fluid was expelled; and here, unless the opening had been large, it might have been forced back into the Fallopian tubes, and so led to some fatal or injurious result. I think, too, the patient's easy recovery was a good deal due to the uterine cavity being washed out so frequently with disinfectants.

Dr. Galabin thought that the course adopted by the author in the case reported was undoubtedly correct. But there were one or two points which experience had not yet fully settled. Was it advisable immediately to wash out the distended uterus with antiseptics, or immediately to introduce a glass dilator into the artificial vagina, as recommended by Dr. Emmet? He was inclined to think it wise to wait a few hours, for fear of setting up spasmodic contractions of the uterus or Fallopian tubes. His experience was, that the difficulty of keeping an artificial vagina in a state suitable for married life or parturition was considerable. He had had a case of total absence of vagina with retention of menses in a girl aged fifteen, which resembled Dr. Carter's in the fact that no trace of os or cervix uteri could be discovered. An artificial vagina was successfully made, but showed great tendency to contract, although made by tearing and not cutting. Menstruation was afterwards natural, but subsequent attempts to enlarge the passage were defeated by the fact that, on two occasions, after the Sims' dilator had been worn for some time, its pressure caused a communication with the bladder, although no incontinence of urine remained after removal of the dilator.

Dr. Routh said that Dr. Carter's case was both interesting and instructive. He had quoted Dr. Routh, but taken the shine out of him, because his (Dr. Carter's) case was successful. But Dr. Routh's case had not died from the operation, but from rupture of another left tubular cyst unconnected with the uterus, because of intermediate closure of the Fallopian tube. Dr. Routh thought this case confirmed the point he had insisted on in his case—the tearing open the new vagina after the first incision had been made. Indeed, he believed in most of these cases the vagina had originally existed, but become subsequently adherent. In this case also there was an early history of scarlet fever, after which

it was well known that inflammatory conditions of the vagina might supervene, and perhaps in Dr. Carter's case the adhesion of the opposed surfaces of the vagina had then occurred. In his (Dr. Routh's) case, from the ease with which he tore it open, he believed it was so, and he thought it would be found to be the case in many other instances. 2nd. The next point as to the dilatation of the new-made vagina. In all cases of atresia vaginæ, even when not so complete as this, he thought tents were to be used. He had never seen bad results follow. The gradual dilatation in such cases at most only giving rise to a very temporary increase of temperature. Once the parts fully dilated, he was in the habit of introducing one of Sims' glass dilators. But in these cases, as well as in the examples of vaginismus which he had treated, after the removal of all traces of hymen and lateral incision necessary, he thought some care should be taken in using these glasses. They should not be too large, nor kept in too long (one to three or four hours at a time), and when pain came on they should be removed, and then after an interval re-applied. Nor should the instruments introduced *be too large.* In this way much causation of inflammation was removed and the cases did well. 3rd. As to the tendency to contraction, Dr. Routh believed, with these precautions, the contraction would be in great measure prevented. This contraction was certainly not by any means so invariable a result as stated by Dr. Carter. He remembered one case in which the late Mr. Baker Brown made a new vagina, the passage scarcely admitting a sound; and in this case (one of his nurses)—and he (Dr. Routh) here spoke from personal examination—the passage remained patent while under observation, and properly so, for months. Subsequently the girl (who was of a very passionate nature) went upon town, and, he was informed, had kept company with horse guardsmen, which implied a full-sized vagina. 4th. In a last point he could not concur with Dr. Carter—the forbidding of marriage. Dr. Routh thought in obstetrical cases we should consider first the woman, next humanity. He (Dr. Routh) thought, kind as were Dr. Carter's notions, his (Dr. Routh's) would have been kinder, because once an honorable attachment had been made, he (Dr. Routh) should not have forbidden marriage; first, because a married life would necessarily have kept the passage open, and secondly, because if his view of the pathology of this affection was correct, the very labour Dr. Carter dreaded would have only made the cure more certain. Impregnation could, of course, only occur if the uterine and ovarian organs were perfectly formed, nor were cases difficult to find where marked atresia had been overcome by a labour, and a perfect cure resulted.

Dr. J. Braithwaite said that there were two classes of cases of atresia vaginæ; the first of which, however, was incomplete, as

a fistulous track existed. This required enlarging by incision and tearing, and then the introduction of some form of dilator or plug. The fact of there already existing a mucous membrane rendered subsequent contraction less liable to occur because this membrane will grow and line the enlarged passage. The second class of cases, those of complete atresia, is divisible into those in which the septum can be opened by tearing, and into those incapable of such treatment on account of the thinness of the septum. The tendency to closure, whatever means is taken to prevent it, may be prevented, to some extent, by the transplantation of one or two strips of mucous membrane from either side of the vulva. This, however, is merely a suggestion, as it had not been tried. The possibility of transplanting a piece of mucous membrane from an animal must also be borne in mind. If a cornea can be transplanted from a rabbit, why not mucous membrane? In difficult cases it would be a good plan to dilate the urethra fully, and then insert the left index into the bladder, and the thumb into the rectum; the part to be operated upon would then be between the two, and completely under observation by touch.

Dr. Godson said that he had, in the morning, seen a young woman for whom he had very reluctantly made an artificial vagina two months since, and though when he saw her a fortnight ago there was a capacious canal, it would now barely admit a penholder, notwithstanding the supposed use of a large bougie daily. In this case the girl had married, not knowing that she was malformed, although she had never menstruated. Upon examination per rectum a tiny anteflexed uterus and ovary were felt; the mammæ and external genitalia were well developed, but there was no trace of vagina. Dr. Godson consented to perform the operation on account of the distress of the patient at having unconsciously done her husband an injustice; but he felt certain, from his experience of previous cases, that the result would be a failure, though promising well at first, and so it proved to be. He should not operate again for atresia vaginæ, unless it were associated with retained menstrual discharge.

Dr. Aveling thought Dr. Carter was quite right in dissuading his patient from marriage. He could not agree with Dr. Routh in believing the majority of cases of absence of vagina to be due to inflammatory adhesion. In the three cases he had seen it was evidently congenital, as in each case there was also no uterus. In all, however, there were ovaries and the usual sexual characteristics.

Dr. Carter, in reply, said that the great difficulty in such cases as these was the maintaining the patency of the passage made—it too readily contracted and closed. Dr. Emmett stated that this was due to the mode in which the passage was made, and that if it was done by tearing through and separating the tissues by the

finger or some blunt instument, there was less tendency to close than when the passage was made by the knife. Dr. Carter did not think this tendency to close depended altogether upon the absence of a mucous lining to the new passage, as suggested by Dr. Braithwaite, for in his case, as well as in others recorded, it is distinctly stated that the passage is lined with a tissue continuous with, and resembling the mucous membrane of the labia minora. It rather depended upon the normal contractility of the tissues themselves. Dr. Carter agreed with Dr. Galabin that it was better to wash out the uterine cavity a short time after the operation than at the time. He had not thought it right to advise marriage in such a state of things as this, and for the reason that he judged that if conception occurred there was no possibility of delivery *per vias naturales*, and the Cæsarean operation would have to be performed. There was no true "os uteri" in this case, and the end of the new vagina was closely attached to the margins of the opening into the uterus, and any dilatation of this by the advancing fœtal part would produce rupture of the uterine walls, &c., and lead to disastrous results.

CASE OF CONGENITAL ABNORMALITY OF THE UTERUS SIMULATING RETENTION OF MENSES.

By J. Braxton Hicks, M.D., F.R.S., &c.

A. T—, æt. 24, of a delicate-looking undeveloped figure throughout. Has never menstruated; never felt well; suffering from headaches and some leucorrhœa.

About twelve weeks ago had severe pain in right hypochondrium, which lasted about four weeks. Somewhere about that time her urine was discoloured, sometimes nearly black, sometimes reddish. This, however, subsided, but about this time also she noticed an increasing swelling in lower abdomen, at first rather on left side, but gradually reaching over to the right. The tension had recently become severe, causing general irritation of the system.

On admission a tumour was found reaching above the umbilicus, hard, tense, semi-fluctuating, putting the parietes to the stretch, causing distress and œdema of legs. She had a good deal of general uneasiness about the pelvis, but

had not distinctly suffered from any monthly increase of distress.

The vagina was of nearly normal length, ending in what, at first moment, appeared like the os uteri, but which was found, on closer examination, to be a kind of transverse depression, beyond which neither the finger nor sound would pass; but beyond this was felt the tumour occupying the upper portion of the pelvis and above, indeed, so exactly like a uterus distended with menses that I considered it to be so. It precisely resembled one I had some years ago where this condition existed. I mean where the very extremity of the vagina and the os uteri were closed and impervious to anything. Examination per rectum confirmed the vaginal examination.

As she was suffering much, and the pulse and temperature rose frequently, I placed her under chloroform, intending to make an opening into uterus; but, even under a full examination, still more deceptive was the case, that exactly at the place where the axis of the vagina was closed, I could feel a circular depression about one inch in diameter, representing a dilated os or canal; I could depress the finger into it, and at this spot I plunged a trocar and canula. It went in easily, and I expected to see the thick menses flow, however nothing but a little bloody serum flowed; the sound was then passed through the canula, with no better result. I then made a fresh examination, and found the same condition, but thinking something possibly had intervened, I passed the trocar again, and also without result; I again passed up the sound into the centre of what I supposed the uterus, without a sign of the menstrual fluid. Thinking now that some unusual condition was present, such as an ovarian tumour without uterus, or some congenital abnormality, I ceased interfering. She was replaced in bed. I may add that the tapping was done antiseptically.

In the night she became very feverish, and next midday the pulse had risen to 160 per minute, temp. 103°. Vomiting came on, and the abdomen more distended and slight

diarrhœa. There was, however, no accession of pain in abdomen.

All these symptoms increased till the pulse became 180 per minute, collapse set in, and she died about thirty hours after the tapping.

Post-mortem examination showed that there was no uterus nor ovaries, but a large cyst attached to the upper end of the vagina, in the place of the uterus, with walls of varying thickness, very irregular on the inside, but smooth out. It was filled half with a cheesy white matter, and the rest with dark grumous material like old clots. The wall above was thinned out and perforated in two or three places, by which its contents, in a fetid condition, had escaped into the peritoneal cavity, had set up peritonitis and gaseous decomposition within. The trocar had passed out of the end of the vagina through two layers of peritoneum, *i.e.* that one covering the end of the vagina and that of the tumour in contact; for the exact centre of attachment had been drawn forward by the upward growth of the mass. However, no fluid had escaped into the peritoneal cavity from this part.

This case is interesting clinically, so closely resembling, as it did in every particular, that of retention of menses, where the upper vagina only is closed. There were two points in which it, however, was slightly different, namely, the want of perfect symmetry in the shape of the tumour, the other in the absence of pronounced menstrual epochs. The presence of these, however, does not, so far as my experience goes, deny the existence of retained menses.

The rarity of the case, perhaps, may remove some of our anxiety in again treating a case presenting the usual features of retention of menses. In this particular instance it is probable that the cyst was on the point of bursting before my interference, and that the operation only hastened this tendency. With regard to the possibility of its having been considered an ovarian tumour, and ablation attempted, great difficulties would have been felt, as adhesions existed all around the lower part of the mass. However, had one been possessed beforehand of an accurate knowledge of the affair,

possibly ablation would have been successful, as, indeed, the only treatment.

The tumour was kindly examined by Dr. Galabin, who reports to me as follows:

"Sections were made by the freezing microtome, including the wall of the cyst and the soft pulpy tissue in continuity with it. The outer wall consists of fibrous tissue, and is about $\frac{1}{12}$ inch in diameter. Some elongated nuclei are found in it, resembling those seen in the embryonic uterus,

A. Tumour. B. Bladder. C. Vagina.

but no completely formed muscular fibres are detected. The soft tissue within is made up mainly of rounded or somewhat angular cells, which, on the average, are at least double the ordinary size of leucocytes, measuring about $\frac{1}{4000}$ inch in diameter. Amongst the cells is a reticulum of delicate fibrillæ, which are connected with the angles of

the cells, and, at short intervals, are seen wavy bands of imperfectly formed fibrous tissue. Some sections are also seen of larger trabeculæ of imperfectly formed fibrous tissue, In the midst of these are some elongated nuclei, like those seen in the outer fibrous wall of the cyst. I should regard the character of the soft tissue to be that of sarcoma, approximating most nearly to the round-celled variety."

Dr. ROUTH stated the practical point brought out by Dr. Hicks's case was, that it would be wise in future first to introduce an aspirator, to learn the quality of the fluid, if any, before plunging in a trocar.

DECEMBER 1st, 1880.

William S. Playfair, M.D., F.R.C.P., President, in the Chair.

Present—87 Fellows and 23 visitors.

Books were presented by Dr. Carl R. Braun von Fernwald, Dr. Carl von Hecker, Dr. Thomas Radford, Dr. Gaillard Thomas, and the Royal Medical and Chirurgical Society.

The following gentlemen were admitted Fellows of the Society:—Samuel Nall, M.R.C.S., William L. Heath, M.R.C.S., and Richard Charlton Harrison, M.R.C.S.

The following were proposed for election:—James Hair, M.D. (Peterborough), James Robert Jones, M.B., John Fisher Le Page, L.R.C.P. Ed. (Durham), William Henry Netherclift, M.R.C.S., and Alfred Th. Roworth, M.R.C.S. (Grays, Essex).

CONJOINED TWINS.

The President exhibited to the Society the conjoined twins Rozalie and Josepha Blazet. These children were born in January, 1878, in Bohemia, their mother being a healthy young woman, twenty-two years of age. They belong to the second of the four classes into which he had divided cases of double monstrosity in his paper on the subject published in vol. viii of the 'Transactions,' viz. "Two

nearly separate bodies united back to back by the sacrum and lower part of the spinal column." There is a broad and firm bony junction at the lower part of the lumbar region, the pelvis being obviously completely fused. There are two labia majora, and a common urethral and anal aperture. There is a double vaginal orifice, the septum separating the two being apparent. Sensation is quite distinct, except where the pelves are joined, where tactile impressions are common to both. There is a peculiar flattening of the inner surfaces of the skulls, where they have apparently lain in contact in utero. The delivery in this instance was very easy, the mother not having been more than a quarter of an hour in labour. The head and shoulders of one twin were born first. The midwife now used strong traction, and then delivered the feet of both children, the head and shoulders of the second twin passing last. This corresponds to the usual mechanism of delivery in this somewhat uncommon variety of double monster. In the three cases cited in the above-mentioned paper all were delivered in this manner, one head and shoulder being born naturally, the corresponding lower extremities being expelled by a process of spontaneous evolution, and the second child coming footling. In this class of monstrosity delivery is probably easier, since the children are rejoined, but there is no necessity for the bodies to be parallel during labour. This is probably the reason why, although the class of monstrosity is comparatively rare, a large proportion of the living monsters have been of this type, as, for example, the Hungarian twins, Juddei and Heléne, who lived to the age of twenty-three, and the so-called Two-headed Nightingale, Milly-Christine, exhibited some years ago in London, and still living.

ECZEMA OF THE NIPPLE IN BOTH BREASTS.

Dr. Thomas Chambers exhibited a drawing delineating very accurately a case of eczema of the nipple in both

breasts, which came under his care at the Chelsea Hospital for Women in March last.

The patient was a healthy woman, aged 21 years. Married six months, and was five months advanced in her first pregnancy. When two months pregnant her nipples became itchy and irritable, exuding a watery fluid, which quickly dried into scaly scabs. The disease steadily advanced until it attained the proportions shown in the drawing, but had not been observed to advance during the last week or two.

When first seen the lower half of each nipple was puffed and œdematous, obliterating the line of demarcation between the nipples and the breasts, while the upper halves were retracted, fissured, and ulcerated. Both breasts were swollen and painful.

The history of the case and the appearance of the breasts closely resembled the history and appearance of patients suffering from eczema of the vulva and vagina during pregnancy—an obstinate and vexatious affection resisting all forms of treatment while the pregnancy continues. What may be the peculiar uterine influence or idiosyncrasy giving rise to so formidable a complication I am not prepared to say, but that some such relationship exists appears certain from the fact that, while the pregnancy continues the eczema resists treatment, but quickly disappears when the pregnancy is terminated, without any special treatment.

Regarding this case as being identical in its nature with eczema of the vulva and vagina, its treatment was tentative, the dilute nitrate of mercury ointment was smeared over the eruption, and a saline aperient was given to keep the bowels well relieved.

The disease continued in much the same condition until after the confinement, after which it began to disappear, and in six weeks the breasts and nipples had assumed their natural appearance of health without any further treatment.

It may, perhaps, be remembered that this subject excited some animated discussions in two of the sister societies about a year ago, from which a deduction or two may be drawn.

First. It would appear that this disease is (fortunately) of rare occurrence. Mr. Henry Morris said that during the last ten years he had seen very many cases of mammary cancer at the Cancer Department of the Middlesex Hospital. When he was Registrar there was no case in which a history of previous ulceration of the nipple could be ascertained, and out of upwards of 500 cases he had seen in the past six years, in only two had eczema of the nipple been associated with cancer of the breast. My own experience is confirmatory of this testimony as to the rarity of the disease. During the last ten years I have seen upwards of 15,000 in- and out-patients, and have only seen two cases, while in private practice, in twice the number of years, I have seen but one.

Second. Those discussions did not finally determine whether eczema of the nipple is the parent or offspring of cancer of the breast, both views found supporters. That eczema of the nipple and cancer of the breast do now and again co-exist is certain, but whether such co-existence is more than a mere coincidence is, I think, fairly open to question.

Third. The important question of treatment was fairly considered in those discussions. The speakers were almost unanimous in their advocacy "of prompt and energetic intervention when an eczema of the nipple resists treatment for a long time."

What, it may be asked, is meant by a long time? In my first case, which came under treatment in January, 1878, the disease had successfully resisted treatment for more than nine months. Besides the eruption the breast was much enlarged, nodulated, and very painful, the lymphatic glands were enlarged, and the arm was swollen, very painful, and incapable of complying with the dictates of the will.

The case had been pronounced to be cancer, and the "energetic intervention" proposed. Notwithstanding the fact that symptoms pointing to disease of the uterus had long preceded the affection of the breast, they had been

regarded as pertaining to the climacteric period and secondary in importance.

By reversing the order of things, and directing suitable treatment to the uterine lesions, the urgent symptoms began to abate, and the breast troubles quietly subsided without any special treatment. In three months all irritation had ceased, and the breast had resumed its normal characteristics and appearances, differing in nothing from its companion.

My second case came under treatment in March, 1878. Her condition, both special and general, was in all essential respects a counterpart of the first case, with the addition, viz. that both breasts were affected, and the eczematous condition had successfully resisted all treatment for more than eighteen months.

The same plan of treatment was adopted as in Case 1, with results equally satisfactory and permanent.

A review of these three cases implies the conclusion that eczema of the nipple is not unfrequently associated with uterine changes, either of a physiological or pathological nature.

The following conclusions may, I think, be fairly inferred:

First. That eczema of the nipple is a rare affection.

Second. That it is peculiar to women, as far as observed facts extend.

Third. That, as far as I have had opportunity of observing, it is always associated with changes in the uterus, either of a physiological or pathological nature, successfully resisting treatment while the exciting cause continues to exist.

Fourth. That eczema of the nipple and cancer of the breast do occasionally coexist, but whether their coexistence is more than a mere coincidence is open to question.

FOLLICULAR HYPERTROPHY OF THE CERVIX.

Dr. Herman showed a specimen of follicular hypertrophy of the cervix uteri. The patient was æt. 33, and had had two children, the last eight years previously. She had suffered from hæmorrhage for three or four months, and for about a week the tumour had been outside the vulva. She had never had much pain, and it was only the appearance of the swelling externally that induced her to seek advice. When seen she was about five months pregnant. The tumour was outside the vulva, and was connected with the anterior lip of the cervix by a pedicle about 2½ inches long, and about as thick as one's little finger. It was removed by cutting through its stalk with the écraseur. No bad symptoms followed; there was no sign of threatened abortion; the patient went to her full time, and was delivered naturally after an easy labour. The tumour was a flattened ovoid in shape, and measured 1⅞ inches long by 1⅜ inches broad, and ⅞ inch in thickness. It was firm and elastic in consistence, but not so hard as a fibroid. On section it was seen to consist of a somewhat loose meshwork, honeycombed with round cavities, in size from that of an ordinary marble downwards. On microscopic examination it was found to contain all the constituents of the normal cervix. The stroma consisted chiefly of white fibrous tissue, with some unstriped muscular fibres, and some elastic tissue. The cavities were cysts lined with regular columnar ciliated epithelium. The muscular fibres and thin nuclei were unusually large, doubtless from the hypertrophy resulting from pregnancy; the same remark applied to the epithelium. Large vessels ran in the substance of the tumour; between the cysts and around them were numerous escaped leucocytes, indicating congestion, doubtless the result of interference with the circulation in the tumour, from its being outside the vulva.

ON THE INDUCTION OF ABORTION AS A THERAPEUTIC MEASURE.

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While the induction of premature labour has been largely discussed in all its bearings, it seems to me that the induction of abortion as a therapeutic measure has not received all the attention its importance deserves. The circumstances which justify it as an operation do not appear to have received precise formulæ, nor to have been defined with any degree of exactitude, at least in this country.

It is true that theses on this subject have been written and defended before the Paris Faculty of Medicine, and various passing notices are to be found in foreign obstetric works; but in the midwifery treatises of our own country very scanty materials appear for the guidance of practitioners, and in one of the latest and best works on the 'Science and Practice of Midwifery,' by our respected President, the induction of abortion is merged entirely in the chapter on the "Induction of Premature Labour."

The two subjects are cognate, and have certain relations to each other, but it is really necessary to treat of them separately, because they have some points of striking dissimilarity.

In the first place, the procuring of abortion is an offence punishable by criminal law, the penalty being transportation for life, while, so far as I know, there is no legal penalty attachable to the induction of premature labour.

In the second place, the induction of abortion, that is, the induction of labour before the termination of six months of utero-gestation, necessarily sacrifices the life of the ovum, while, when premature labour is induced, one of its avowed objects, and in some sort its obvious justification, is that it may save the life of the child.

Further, suspicion of criminal intent attaches itself more readily to the induction of abortion than it does to the induction of premature labour, because the first may be done in secret, and the evidence destroyed, while in the latter case the child remains as an evidence of *bona fides*.

I do not propose here to speak of abortion as provoked for immoral purposes. This subject has been most exhaustively treated in an admirable memoir by my friend, Dr. H. R. Storer, of America.

The propriety of provoking abortion in certain grave and perilous crises is tacitly acknowledged by obstetric authorities equally with the propriety of inducing premature labour, but it is usual to say that no rules can be laid down, and that each case must be judged on its merits. This lack of rules for guidance may unfortunately lead to serious abuse, and the ease and impunity with which abortion can be produced in many cases requires that the proceeding should be carefully regulated.

The Obstetrical Society may, I think, render a genuine service by discussing and formulating general principles, which, while they leave a certain latitude to the judgment of the practitioner, may serve to guide him in the right selection of cases, and prevent laxity in practice.

I have been more especially induced to bring this topic before the Society, inasmuch as examples have repeatedly come within my knowledge where abortion has been provoked for reasons which seemed to me quite inadequate. In these instances the medical man was, no doubt, acting in entire good faith, and believed his interference was in the interest of his patient, but it would have been very difficult to sustain his action in a court of law, and in case of any misadventure his position would have become an eminently perilous one.

For example, one medical man, without any reservation, wrote to me about a patient who had been delivered after a severe first labour, and whose perineum had been badly ruptured. Seven months later, she being again four or five months pregnant, it was deemed advisable to induce mis-

carriage, and a fortnight after the proceeding was begun she aborted. Four months later she again, as he expressed it, unfortunately fell pregnant, and though, with some compunction, my correspondent said, a sound was introduced when she was a month advanced. No result followed this, and therefore it was considered advisable to leave matters alone, especially as the union of the perineum seemed perfect. The labour which terminated this pregnancy was perfectly easy and natural, and the only reason for inducing abortion was the fear lest the perineum should again be torn if a second labour at full term followed after so short an interval.

In a second case an attempt was made to induce abortion in the second month, because the patient, although anxious to have children, had spontaneously aborted not long before, and it was feared pregnancy had recurred too speedily again for a successful issue to be expected; and besides it was then inconvenient. A much-desired journey would have to be postponed if symptoms of miscarriage recurred at the same period as before. Fortunately the attempt failed, and the patient went to her full time and had a living child.

In other instances I have been consulted by medical men as to the propriety of procuring early abortion, because the patient habitually suffered much physical discomfort during her pregnancies, and it was feared her health would be impaired by a further continuance of pregnancy and subsequent delivery; and on more than one occasion I have been urged to sanction the uterus being emptied before the sixth month, because the expectant mother expressed her strong belief that she would die or go mad if she had another child, or because she threatened to commit suicide if pregnancy was not stopped.

These are but some of the examples which present themselves to physicians in consulting practice, and one can quite understand how the protestations of patients and the appeals of distressed friends may warp the mind of the sympathetic practitioner, and perturb his accurate view of the question, more especially if he has no authoritative rules for his

guidance. There is a very prevalent belief that no great harm, physical or moral, is done by destroying the ovum in early pregnancy. I have often to remind wives and mothers who are either anxious to promote miscarriage or are indifferent as to its occurrence, that it is no slight thing as they suppose; that when occurring accidentally it is often more damaging to health than natural parturition at the full time; that it more frequently lays the foundation of subsequent disease; and if repeated, abridges the period of youth and comeliness. These risks are necessarily greater if abortion is induced; for, however skilful the operator, this cannot be done without some violence.

There can be no doubt that certain expressions in the English law, which should long ago have been amended, tend to foster the idea that fœtal life has comparatively little value in the early periods of gestation, and to give women the impression that no great sin is committed if they succeed in destroying the product of conception before the child's movements are felt. Thus, the provision for staying the execution of a murderess, if she be found "quick with child," appeals at once to the imagination of the uninstructed and favours the notion that pregnancy antecedent to this period has no tangible value. Yet physiology and the study of development clearly teach us that long before movement is felt by the mother, the body of the child is endowed with all the attributes of individual life, and that active movements takes place in utero. The only difference after "quickening" is that the womb has then risen up into the abdominal cavity, and so allows the fœtal movements to be felt by the sensitive abdominal walls.

The English law nevertheless takes a very serious view of the question of procuring abortion, and has endeavoured to fence it round by grave penalties. This may be gathered by referring to the statute. It is laid down in Statute 1, Vict. clxxxv, S. 6: "Whosoever, with the intent to procure the miscarriage of any woman, shall unlawfully administer to her, or cause to be taken by her, any poison or other noxious thing, or shall unlawfully use any instrument or

other means whatsoever with the like intent, shall be guilty of felony, and being convicted thereof shall be liable, at the discretion of the Court, to be transported beyond the seas for the term of his or her natural life, &c."

It may be remarked, in reference to this, that there can be no doubt any medical man who procured miscarriage would be held not to have performed an unlawful act if he could prove that his treatment was free from any other motive than the physical welfare of his patient, and if he could further prove that it was amply justified by the circumstances, but this last would be the important point in issue.

Dr. Swayne Taylor says, in reference to the induction of premature labour: "The question respecting its illegality cannot be entertained, for the means are administered or applied with the *bonâ fide* hope of benefiting the female, and not with any criminal design. It is true that the law makes no exception in favour of medical men who adopt this practice, nor does it in the statute of wounding make any exception in favour of surgical operations, but what is performed without evil intention would not be held unlawful." And on another page, speaking of the need for safeguards and caution in the induction of premature labour, he says: "In the event of the death of the mother or child, he exposes himself to a prosecution for a criminal offence, from the imputation of which even an acquittal will not always clear him in the eyes of the public." And again, "A charge is only likely to arise when a man has been unfortunate, and the responsibility of one operator cannot be measured by the success of others." It is obvious, therefore, that whoever undertakes to induce labour, and abortion if he proceeds to procure abortion, to which special legal penalties are attached, must have substantial grounds for the action he takes, and such grounds as can be sustained by authorities on the subject, otherwise he may incur the risk of acting from unworthy motives, or be open to a charge of malpraxis.

As the object of this paper is to elicit discussion. I do not propose to go with minute detail into all the circumstances

which may require the induction of abortion, but rather to sketch them in broad outline.

The pathological reasons adduced as justifying the induction of abortion may be briefly stated under the following heads:

1. Such narrowing or deformity of the female pelvis, clearly ascertaiuable during the earlier months of pregnancy, as will absolutely preclude the birth of a viable child. The smallest diameter permitting the passage of a living child has been calculated at $2\frac{3}{4}$ inches. If, therefore, the largest diameter present is less than this, either abortion must be induced, or the patient being allowed to go her full time must be delivered by craniotomy or embryulsio, or by Cæsarian section.

2. When the genital canals are so narrowed by the presence of tumours, of cicatrices, or of malignant disease, that the transmission of a viable child at a later period is impossible.

In reference to this class of cases, it may be remarked that great care is necessary not to overestimate the amount of obstruction, and that it is surprising what nature will effect in the way of dilatation when the proper time comes, so that sometimes the most unpromising cases going to the full term end happily. It has further to be considered that obstructing soft tumours may often be removed, or they may be lessened or pushed aside when the full period of gestation arrives. Some tumours, again, seeming quite hard, may yet prove on puncture not to have solid contents.

In extreme forms of obstruction arising both in the hard and soft parts of the female pelvis, and which cannot be remedied, the question of making Cæsarian section the alternative for abortion necessarily presents itself. In later days the dangers of abdominal section are apparently so much diminished by antiseptic methods that the operation is viewed with increasing favour. The puerperal state, no doubt, adds an element of grave risk to all abdominal operations, but if once an encouraging series of successful Cæsarian sections under these circumstances gave the hope that a

woman going her full time had a fair change of recovery by submitting to the operation, the reasons for provoking absortion would in a great measure be undermined. Abdominal section then would be regarded as the proper treatment, for it would afford a prospect of saving both mother and child. Before antiseptic surgery was talked of some authorities regarded the Cæsarian operation preferable to the responsibility and risk of procuring abortion. I recollect distinctly hearing the late Sir James Simpson declare in his lectures that although it might be right to relieve a woman with extreme pelvic deformity by abortion *once*, yet abortion ought to be so jealously restricted that if the woman became again pregnant, after being thoroughly warned of the consequences, she ought to take her chance of Cæsarian section at the full time. Dr. Denman, Dr. Tyler Smith averred, had like scruples on this point, and Dr. Radford advocated the right of the fœtus as opposed to that of the mother in such cases. I confess I have hesitation in adopting these views, inasmuch as poor women are not always free agents in these matters, and some of the most deformed women I have seen, have been also half-witted from defective development, thus being unable to protect themselves from the risks of pregnancy.

Cæsarian section may, with much reason, be preferred to abortion in extensive malignant disease of the cervix uteri and vagina complicating pregnancy. In many instances the woman would probably go her full time, and her child's life might be saved by abdominal section. Under any circumstances the duration of the woman's life must be short, and she might have as fair a chance of extending it by this operation as she would have if abortion, with all its attendant irritation, were induced.

3. In obstinate vomiting depending on pregnancy, when the patient's strength is so reduced that a fatal result is anticipated, if relief cannot be afforded.

There are now so many remedies and devices for combating the sickness of pregnancy, that only in extreme cases may it become necessary to provoke abortion. When medicines fail,

my friend the late Dr. Copeman, of Norwich, firmly believed that a minor degree of dilatation of the os uteri would stop severe vomiting without bringing on uterine action in most instances. When, however, all other expedients are fruitless, if the patient has become seriously emaciated and enfeebled, and more especially if she begins to exhibit those later and more formidable symptoms of exhaustion, disturbance of the sensorium, with dark grumous vomiting, it is time to set about emptying the uterus, and this affords the only chance of saving life.

4. In eclampsia or puerperal convulsions during early pregnancy, with or without albuminuria, where the attacks are so frequent and severe as to imperil the life of the patient. In these cases all the resources of art for the treatment of convulsions should first be exhausted, and abortion only be induced as a last resort to save life. The opinion of Dr. Bland, which was also that of Dr. Gooch in former days, that the practitioner should "take care of the convulsions and let the uterus take care of itself," can only be adopted within certain limits.

The continuance of pregnancy in some subjects of eclampsia is so obviously incompatible with the safety of the patient, notwithstanding all other treatment for the convulsions, that emptying the uterus remains as the only alternative. This may especially be the case when the uterine walls are unduly tense from a superabundance of liquor amnii. Then the puncture of the membranes will probably bring at once an amelioration of the condition of the patient, followed by subsequent recovery.

5. In some instances of irreducible retroversion or flexion of the uterus. It should, nevertheless, be distinctly understood that the mere existence of this form of displacement, and the impossibility of immediately reducing it, does not necessarily call for the induction of abortion; only when it gives rise to grave symptoms, imperilling the life of the patient is it permissible. No legitimate effort should be spared to raise the uterus when once the displacement is discovered, and it produces inconvenience; but it should be

recollected that an adjustment often takes place spontaneously at the time of quickening, even when attempts to raise it have failed, and it is also quite possible for a woman to go her full time with a retroflexed uterus and be safely delivered at the full time. A well-known example of Dr. Oldham's is published in the 'Transactions of the Obstetrical Society.'

6. In cases of severe and uncontrollable hæmorrhage during early pregnancy threatening the life of the patient.

7. In certain acute and chronic diseases where the complication of pregnancy is undoubtedly endangering the safety of the patient, and where bringing gestation to an end enhances her chances of recovery. In this view, it has been proposed to induce abortion in cases of acute dropsy with albuminuria, where other treatment has been unsuccessful and the patient is brought into a dangerous state of anæmia and debility; in cases of hæmorrhage from the bowel threatening to end in death; in disease of the heart attended with urgent and dangerous dyspnœa; in cases of severe chorea, and also of mania depending on pregnancy. To these may probably be added some other complications induced by or kept up by pregnancy. For example, Mr. George Lawson, the well-known ophthalmic surgeon, suggests that there are some forms of *nephritic retinitis* occurring during pregnancy, and associated with albuminuria, in which it may be justifiable to stop pregnancy. He instances a case within his own experience, where the sight of both eyes was well-nigh destroyed by retinal hæmorrhage; and as the disease is progressive he thinks the disaster might be averted, and the subsequent life of the patient be preserved, by terminating pregnancy when the first symptoms are developed. Before adopting this suggestion one ought to be well assured that the proposed remedy will arrest the malady for which it is prescribed, and aid in repairing the damage already produced, otherwise it may be but adding another complication to a case already sufficiently serious.

I do not pretend to exhaust the list of complications

occurring during pregnancy which may call for the induction of abortion as a therapeutic measure. It is quite possible that increase of pathological knowledge may point out conditions as yet unsuspected, which may be best treated by this means.

On the other hand, experience has already proved that some better alternative than the provocation of abortion may be adopted in cases where formerly this was deemed indispensable. In ovarian tumours complicating pregnancy it has been found compatible, both with the safety of the woman and with her pregnancy, to remove the tumour during gestation. Thus, the perils incident to gestation, parturition and subsequent to delivery are avoided.

I do not here enter into the question as to the morality or expediency of preventing or avoiding pregnancy in certain cases, but when conception has actually taken place, I hold it incumbent on the medical man to bear in mind that the product of conception is protected both by the acknowledged laws of morality and by the laws of our country. No one has any right to destroy a potential human being, however early the period of development, except for the weightiest reasons.

The members of the medical profession are so far trusted by the public, and even by those in authority, that upon them devolves a special responsibility of resisting any attempts to destroy immature fœtal life which are not *absolutely* necessary, but to be able to speak confidently as to when such an operation is necessary. The medical man ought to be thoroughly conversant with the circumstances which are admitted by authorities to justify such procedure.

The responsibility of provoking abortion is regarded so great, and the proceeding so likely to be abused, that M. Tardieu suggested every physician should make a legal declaration of the act to the public prosecutor immediately on inducing labour, even if the period of viability had been reached by the fœtus. In any case this responsibility should never be undertaken without holding a consultation of two

or more medical men, nor without the most careful consideration.

I would propose to lay it down as a general rule that the induction of abortion is only a legitimate operation *when the life of the mother is so imperilled by the continuance of pregnancy that emptying the uterus presents itself as the only alternative to save the patient.*

Its adoption in other cases, such as insanity, chorea, and the like, is at least problematical, and, except in the rarest cases, the proper treatment in these complications is probably to cope with the morbid condition, and leave the pregnancy to take care of itself. Gestation has only a limited time to run, and it may, in most cases, be competent to tide over the difficulty until the full period, or at least to such time as the child is viable.

From time to time instances must present themselves which seem, so to speak, on the border-land, without actually being within the limits of immediate danger, so far as the woman is concerned. These must necessarily require the more careful consideration, and consultation between two or more practitioners becomes the more imperative.

Such reasons as the fear of a fresh laceration of the perineum, or of any such temporary injury or inconvenience; the fear of repeated spontaneous miscarriage, afford no valid reasons for the provocation of abortion; and the medical man should guard studiously against the proposals so often made by patients, or their husbands or friends, to induce miscarriage for various specious reasons, which simply mean that the woman has incurred the risks of pregnancy and is unwilling to abide by the results.

The dangers apprehended of going through another confinement, or of a break down in physical or mental health, are at least doubtful, and no apprehension of possible dangers which may never be realised should induce the prudent medical man to adopt a course which, under any circumstances, ought to be regarded as a last resort.

It has elsewhere been wisely put that "to justify abortion

life must certainly, or very probably, be endangered, not possibly merely, which is true of every pregnancy, and might be alleged at every trial for the crime."[1]

The PRESIDENT hoped that Dr. Priestley's interesting paper would give rise to an animated discussion. No one could doubt the great practical importance of the subject, involving as it did so many delicate and difficult ethical points, and it was somewhat curious that it had not previously been brought under the notice of the Society. In one respect we could congratulate ourselves that the practice of induced criminal abortion was, so far as his own experience taught him, by no means so prevalent as in other countries, more especially in America, where it seems to have attained very formidable proportions. No doubt patients frequently spoke in a very lax way about inducing abortion. Only that very morning a patient had requested him to sanction its being done, but in spite of occasional instances of this kind, he was glad to think that the practice itself was not by any means a common one.

Dr. BARNES said there was no question in medicine in which ethical, moral, and pathological considerations were more intimately blended than this of the induction of cutting short the term of pregnancy. It was impossible to discuss adequately the paper as a whole, or to follow it through its details. He would, therefore, limit his observations to a few special points. In his 'Obstetric Operations,' he had strongly insisted upon the importance of never undertaking this operation without a consultation. The advantages of this proceeding were great both to patient and physician. The necessity for the operation would be thoroughly examined; two men would not be likely to conspire in error or crime; and the consultation would be an effective safeguard against censure. He had also, in the same work, discussed Simpson's proposition that it might be right to deny to a woman the privilege of repeated delivery by craniotomy, and to make her take the peril of Cæsarian section in future pregnancies. He could not contemplate the affirmation of this. We were bound to protect the woman. She was not a free agent. Why should the penalty fall upon her? As to the occurrence of retinal effusion with albuminuria, described by Lawson, cases had been also described by Power. He himself had seen several, two in which recovery took place after inducing labour. He thought the motive was adequate. He could not assent to the author's indications for the operation. If we waited for "grumous vomiting" and the other extreme symptoms he postulated, we

[1] Dr. H. R. Storer, loc. cit.

should wait too late. The operation then done might fail to save the patient. He would submit as the result of some experience that, say in cases of urgent vomiting, when emaciation was proceeding, the pulse and temperature rising, and general treatment failed, when it was obvious that the patient was feeding upon herself, upon the absorption of her waste tissues, there was a dangerous state of toxæmia, and the indication to bring the pregnancy to a close was strong. Applying this instance to the author's general proposition that in certain cases, as insanity complicating pregnancy, it was our duty not to induce labour, but "to treat the disease and to let pregnancy take care of itself" he could not as a physiologist and pathologist refrain from expressing emphatic dissent. The disease depended upon the pregnancy. There existed, during pregnancy, a high nervous and vascular tension and blood-changes, which were immediate factors in the production of brain, kidney, and general distress; and so long as the pregnancy lasted so long would its effects endure to the peril of the patient. To heal the disease, then, disregarding its cause, could not be wise.

Dr. Hickinbotham, in expressing his high sense of the value of Dr. Priestley's communication, asked him to supply what he ventured to think a rather important omission in the consideration of the advisability or non-advisability of a surgical procedure, viz. the question of the danger or safety of the operation. In Dr. Priestley's experience, was the procuring of abortion in the early months specially dangerous to the woman?

Dr. Murray thought the subject of the paper one of very great importance. To his mind syphilis should not be overlooked as a reason why abortion may not be induced. He cited the case of *early* conception, preceded by secondary or even tertiary syphilis in the husband, which would through the fœtus inoculate the wife. Whether an early abortion might not prevent the poison being so thoroughly absorbed by the female, and so allow her system an escape, which otherwise usually leads to a succession of stillbirths or syphilitic offsprings.

Dr. Graily Hewitt agreed in the main with the principles laid down by Dr. Priestley in his paper. Facts had come under his own notice which showed necessity for definition of principles in regard to this subject. One class of cases he would more particularly allude to, those in which pregnancy produces a great irritability of the nervous system, and in which it is feared or dreaded that the brain may give way. In one case of this kind, in which he had been consulted in reference to the necessity for inducing abortion, it was evident that this depended on want of food, and when measures were taken to remedy the defect the symptoms became ameliorated.

Dr. Roper remarked on the great rarity of an absolute necessity of producing abortion for the purpose of saving maternal

life. Diseases threatening life during pregnancy presented themselves in two different aspects. First, those which were the direct result of pregnancy, and secondly, those, both acute and chronic, which existed quite independently of pregnancy, the serious consequences of which pregnancy greatly increased, but he had never, under either circumstance, believed it necessary to produce abortion, and he had never seen a patient die in any such case. It was a very common thing for nature to come to the rescue by spontaneous abortion. Concerning the question of criminal abortion, he thought, from the frequent applications made to medical men, that its practice was not uncommon, and he did not believe it was restricted to the vicious doings of herbalists. Under every form in which the question comes before us in practice, there could be no difficulty in deciding where propriety ended and immorality or criminality commenced.

Dr. Edis considered the Society was much indebted to Dr. Priestley for the able manner in which he had brought forward the subject. It would be well to limit the discussion to the question of abortion during the first half of pregnancy, as, otherwise, the consideration of the advantages of laparo-elytrotomy over Cæsarian section and other subjects would occupy too much time at present. Dr. Edis thought that many an obstinate case of vomiting, for which abortion was often regarded as the only cure, might readily be overcome by attention to the condition of the cervix uteri. The application of caustics or styptics where granular erosion existed, partial dilatation of the cervix, or the insertion of sedative pessaries in the vagina would often be difficult. The cervix had even been removed by the écraseur during the first half of pregnancy without abortion occurring, showing how tolerant the uterus was of interference at this time, provided the cavity of the body was not involved. Feeding by the bowel, even for many consecutive weeks, would, in many instances, avert the necessity for bringing on abortion for the relief of persistent vomiting. He thought the induction of abortion should never be resorted to until every known method of relief had been tried and failed. In those cases of apparently irreducible retroversion of the gravid uterus about the fourth month, much might be accomplished by keeping the patient resting either in the semi-prone or semi-pectoral position, if necessary, for several hours at a time, before attempting reduction. Pregnancy had been known to advance to full time, and labour to be completed naturally, the retroverted uterus remaining unreduced, the anterior wall of the uterus becoming inordinately developed. In cases of disease of the heart he agreed with Dr. Barnes that, in urgent cases, it was essential to empty the uterus, as the pregnancy was the exciting cause of the augmented cardiac distress, and could not be relieved until removal of the exciting cause.

Dr. CLEVELAND said: In addition to cases we not infrequently hear of where married women, supposed to be respectable, attempt to procure abortion on themselves with the same heedlessness as they would take an ordinary aperient, there are others where the husband deliberately requests the medical attendant to induce abortion, on the alleged ground that his wife could never survive such a pregnancy or delivery as the last. He would only mention two cases that had occurred in his practice. About six years ago he attended a lady who had a difficult instrumental labour arising from contracted brim. When she again became pregnant her husband urgently requested that abortion might be induced. This was objected to on the ground that there was ample room for a living child to pass, and accordingly premature labour was induced between the seventh and eighth month with a satisfactory result. When pregnancy again occurred the same request was preferred, even more vehemently than before, and as he still maintained that it was unreasonable, the lady placed herself under another practitioner, who tried for some time to bring about abortion unsuccessfully. In the end he (Dr. Cleveland) induced labour at the same period, and with a similar happy result. In the second case the lady was the subject of obstinate vomiting, diarrhœa, &c., and both she and her husband were very desirous that an end should be put to the pregnancy. Consultations were held, and a high obstetric authority expressed his opinion that the fœtus was dead. Still it was not deemed advisable to take action, and the patient went to the end of term, and gave birth to a living, although deformed, child. Within the last month or so this lady, having perfectly recovered her health, has again become pregnant, and her husband, to use his own words, "is determined to take the bull by the horns this time," or, in other language, to have a stop put to the pregnancy. Now, in both the above cases it is obvious that if abortion had been induced there would have been a needless sacrifice of infant life. Dr. Cleveland did not gather from the paper that the author recommended the induction of abortion as a therapeutic agent, except under exigent circumstances; and he fully agreed with him that it was then advisable, but yet should be previously agreed to in consultation. He joined with Dr. Daly in vindicating general practitioners from the suspicion of being prone to induce abortion without cogent reasons.

Dr. MALINS said he had listened with much pleasure to the paper by Dr. Priestley, but before its echo died away he could not refrain from expressing the opinion that much responsibility rested with those who advocated the induction of abortion as a therapeutic agent without very grave and serious consideration. If it were possible he would add another condition to the rule laid down by Dr. Priestley, that it should only be done after consultation, namely, that those interested should read carefully

the remarks embodied in this paper before resorting to the practice of which it treated. He was inclined to think that the production of abortion was not, in some instances, an easy matter, even in skilled hands, and that beyond this his experience led him to believe that it was not always without risk to the patient; indeed, that in some acute cases it involved additional danger, and even substituted a greater evil than that which it was intended to relieve. Thus, he had seen septic symptoms follow in cases where active kidney mischief was present, and he thought that the chances of this infection was much more probable when abortion was produced in the presence of such conditions or those accompanied by blood changes. He had seen two cases of chorea, one where the cervix was normally dilated to the extent of an inch and a half, with much alleviation of the symptoms, the patient going on to the full time; another one where this was followed by abortion, the patient dying within forty-eight hours after from the effects of it. In reference to the vomiting of pregnancy, he thought that there were few cases where it would be justified, for with the means at present at our command time may always be gained, and those were essentially cases that sometimes mended, even at their worst, as a result, or even in spite, of the treatment adopted. Abortion occurring in these cases of defective nutrition was often followed by consequences more deleterious to health, which every effort should be made to avert rather than render liable to happen. Therefore, the results of abortion on the future health of the patient should be adequately recognised and weighed deliberately with the state its intentional production sought to relieve. It would be well in estimating the success of the present that we should bear in mind the chances of failure in the prospective return of perfect health to the patient.

Dr. Hayes said it was difficult to consider the question before us impartially, owing to the strong prejudice that existed in the minds of medical men against the production of abortion under any circumstances. From the moment one entered the hospital as a student one was taught to regard even the unwitting induction of abortion as blameworthy. Dr. Priestley, then, had done good service in pointing out its legitimacy, and Dr. Hayes could not but think that in some cases of cardiac disease, of albuminuria, with or without retinitis, it was desirable. He would have liked to have heard Dr. Priestley's opinion as to the best method for bringing it about. He himself would be in favour of preliminary dilatation by means of sea-tangle tents, as he thought the process would be under the control of the practitioner in its subsequent stages. If there was any delay in the expulsion of the ovum or membranes, the carbolised finger could readily be introduced.

Dr. Priestley, in reply, said he must first thank the Fellows

of the Society for the favour with which his paper had been received, and he wished it to be distinctly understood that he made no imputations on his professional brethren, but desired to surround the induction of abortion by proper precautions. He might say at once, in reply to Dr. Hayes and other speakers, that it formed no part of his purpose to describe the methods of inducing abortion. The time at his disposal did not permit such extension of his paper. It was well known to be only too easy to induce abortion in some cases, and the mere use of the sound for diagnosis, where pregnancy was not suspected, had provoked miscarriage. There were other cases where it was a most difficult operation. The use of the sound for this purpose failed, and nothing short of fully dilating the cervix by sponge tents and removing the contents of the uterus sufficed to bring pregnancy to an end. Thus, in reply to Dr. Hickinbotham and Dr. Malins, he might say that he believed the induction of abortion not free from danger, even where all due care was exercised. He feared that the necessity for the induction of abortion was more frequent that the experience of Dr. Roper and Dr. Edis would seem to indicate, but he was glad to enlist those authorities on the conservative side of the question. The object of the paper was not to treat exhaustively all the occasions which might arise for operative interference, but to elicit the discussion and the opinions of those who had wide experience. The opinions expressed showed there was a certain divergence of opinion on some points of the question, and he thought there was force in the statement of Dr. Barnes, that in the desire to avoid emptying the uterus as long as possible one might, in some cases, wait too long for the safety of the patient. He did not wish to dogmatise, either as to the nature of the cases calling for interference or as to the precise time for it. The medical and ethical relations of the subject were indissolubly bound up together, and he thought it might be worth the attention of the Council to consider the appointment of a committee, not to lay down strict rules, but to formulate some principles which, on the one hand, would authoritatively tend to check abuses, and, on the other, strengthen and sustain those who were acting in the right.

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For Collective Biographical Works, see under BIOGRAPHY.

N.B.—The names of the Subjects of Memoirs in the following List are printed in Roman when the Life is attached to their Works, and in Italics when it is distinct from them, in which case it will be found under the name of the Author.

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—— *Amputation, Utero-ovarian:* Wasseige, 1878.
—— *Catheterization of:* Valenta, 1871.
—— *Removal of a Myoma of:* Neugebauer, 1866.
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—— *Dropsy:* *Winckler, 1745; Gregorini, 1795; *Geil, 1822; Fabbri (G.), 1871.
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—— *attended by Discharges:* Clark (Sir. C. M.), 1814—31.

—— *in Southern India:* Shortt, 1864.

—— See PREGNANCY and PARTURITION (Diseases of); PUERPERAL DISEASES; BREAST (Diseases of.)

WORMS

(INTESTINAL AND PARASITIC) [Entozoa]: Mercurialis [Trallianus], 1584; Spigelius, 1645; Linden, 1645; *Palmer, 1766; *Burn (A.), 1827; Rhind, 1829; Kuchenmeister, 1857; Siebold, 1857.

—— (*Cystic*): Siebold, 1857.

—— (*Tape*): Spigelius, 1645; Siebold, 1857.

—— *Dracunculus sive Filaria Medinensis:* *Thomson (G.), 1827.

WOUNDS: Corbæus (H.), 1620.

Cure of, by Sympathy: Highmore, 1651.

Effects of, during Pregnancy: Cornillon, 1872.

YELLOW FEVER: Bancroft, 1811; *White (M.), 1827; Bartlett, 1842.

ZOOLOGY: Lawrence (W.), 1834.

ZOONOMIA, *or Laws of Organic Life:* Darwin, 1794.

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